



POA VALIDATION REPORT

WUHAN TIANYING ENVIRONMENTAL
ENGINEERING CO., LTD.

ANIMAL MANURE TREATMENT PROGRAMME IN
HUBEI PROVINCE

Report No: 8000399165 – 11/447

Date: 2012-12-23

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PoA:	Title:	Initial PoA-DD Version:	Final PoA-DD Version	
	Animal Manure Treatment Programme in Hubei Province	1 st GSP: Ver. 01 2011-08-17 2 nd GSP: Ver.04 2012-11-21	Ver. 05 2012-12-23	
Project Participant(s):	Non-Annex 1 country:	Annex 1 country:		
	P.R. China	United Kingdom		
	PP from Non-Annex 1 country:	PP from Annex 1 country:		
	Wuhan Tianying Environmental Engineering Co., Ltd.	A&T Carbon Asset Co., Limited		
	Coordinating Managing Entity			
	Wuhan Tianying Environmental Engineering Co., Ltd.			
Applied methodology/ies:	Title:	No.:	Scope / TA:	
	Methane recovery in animal Manure management systems	AMS-III.D ver.18.0	15 / 15.2	
Validation team / Technical Review and Final Approval	Validation Team:	Technical review:	Final approval:	
	Huang Jie (TL) Yu Miao (TM) Walter Ulrich (TE)	Winter, Stefan Stöhr, Christina	Schubert, Jochen	
Expected Emission reductions: [t CO₂e]	Expected emission reductions over the first crediting period:		(Expected) PoA starting date of the crediting period:	
	25,641		2013-02-01	
Confidential content:	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
Key dates of validation:	Publication of PDDs:	Draft Report issued:	On-site (from):	On-site (to):
	1 st GSP: 2011-09-02 2 nd GSP: 2012-11-23	2012-02-23	2011-11-20	2011-11-22
Summary of Validation Opinion:	<p>In detail the conclusions can be summarised as follows:</p> <p><input checked="" type="checkbox"/> The PoA is in line with all relevant host country criteria (P.R. China) and all relevant UNFCCC requirements for CDM. Project activity approvals have been obtained from DNA of P.R. China vide the Letter of Approval (HCA) dated 2012-04-18 (No. 3968) and from DNA of UK dated 2012-06-27.</p> <p><input checked="" type="checkbox"/> The PoA additionality is sufficiently justified in the PoA-DD.</p> <p><input checked="" type="checkbox"/> The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient.</p> <p><input checked="" type="checkbox"/> The monitoring plan is transparent and adequate.</p> <p><input checked="" type="checkbox"/> The calculation of the PoA emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 25,641 tCO₂e of the 1st CPA are most likely to be achieved within the (1st renewable) crediting period.</p> <p><input checked="" type="checkbox"/> All information has been consistently applied in the generic component of the POA-DD.</p> <p><input checked="" type="checkbox"/> The conclusions of this report show, that the PoA, as it was described in the project documentation, is in line with all criteria applicable for the validation.</p>			
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Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating / Managing Entity
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	CDM Executive Board
EC	Eligibility criteria
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GSCP	Global Stakeholder Consultation Process
IPCC	Intergovernmental Panel on Climate Change
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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1 OBJECTIVE / SCOPE

The purpose of a PoA validation is to have an independent third party assess the project design. In particular the project's baseline, the monitoring plan (MP), and the project's compliance with

- the requirements of Article 12 of the Kyoto Protocol;
- the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1
- the annex to the decision;
- subsequent decisions made by COP/MOP & CDM Executive Board and
- other relevant rules, including the host country legislation and sustainability criteria

are validated in order to confirm that the programme design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders on the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the programme design including especially: the correct application of the methodology, the programme's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PoA-DD and other relevant supporting documents, to ensure that the proposed CDM programme activity meets all relevant and applicable CDM and PoA criteria.

The information included in

- the completed Clean Development Mechanism Programme of Activities Design Document Form (the "CDM-PoA-DD") incl.
 - Part A: Programme of activities (PoA) and
 - Part B: Generic component project activity (CPA)
- one completed real case CDM-CPA-DD (the "Real-Case CDM-CPA-DD"), and
- the relevant supporting documents

was reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Standard^{/VVS/}, carried out a full assessment of all evidence to assess the compliance of the programme with the key areas as outlined in section VII. and VIII.F of the VVS (version 03.0, EB 70)^{/VVS/} as well as the Standard for Demonstration of additionality, development of Eligibility Criteria and Application of Multiple Methodologies for Programme of activities (version 02.0, EB 70)^{/POAR/}.

The validation is not meant to provide any consulting to the project participants. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the programme design.

2 POA DESCRIPTION

2.1 PoA Characteristics

Essential data of the PoA is presented in the following Table 2-1.

Table 2-1: PoA / rcCPA Characteristics

Item	Data		
PoA title	Animal Manure Treatment Programme in Hubei Province		
1st CPA (real case) title	Animal Manure Treatment Programme in Hubei Province--CPA-0001		
PoA size	<input type="checkbox"/> Large Scale <input checked="" type="checkbox"/> Small Scale		
PoA Scope <i>(according to UNFCCC sectoral scope numbers for CDM)</i>	<input type="checkbox"/>	1	Energy Industries (renewable- /non-renewable sources)
	<input type="checkbox"/>	2	Energy distribution
	<input type="checkbox"/>	3	Energy demand
	<input type="checkbox"/>	4	Manufacturing industries
	<input type="checkbox"/>	5	Chemical industry
	<input type="checkbox"/>	6	Construction
	<input type="checkbox"/>	7	Transport
	<input type="checkbox"/>	8	Mining/Mineral production
	<input type="checkbox"/>	9	Metal production
	<input type="checkbox"/>	10	Fugitive emissions from fuels (solid, oil and gas)
	<input type="checkbox"/>	11	Fugitive emissions from production and consumption of halocarbons and hexafluoride
	<input type="checkbox"/>	12	Solvents use
	<input type="checkbox"/>	13	Waste handling and disposal
	<input type="checkbox"/>	14	Afforestation and Reforestation
	<input checked="" type="checkbox"/>	15	Agriculture
Applied Methodology/ies	AMS-III.D ver.18.0(version18)		
Technical Area(s)	15.2: Animal waste management		
Starting date of crediting period of the PoA	2013-02-01		
CPA Crediting period	<input checked="" type="checkbox"/> Renewable Crediting Period (7 y) <input type="checkbox"/> Fixed Crediting Period (10 y)		
Start of crediting period of 1 st (real case) CPA	2013-02-01		
Estimated tCO ₂ eq reductions of the 1 st CPA over the 1 st crediting period	Annual average		3,663 tCO ₂ e
	Total estimation over the 1st crediting period		25,641 tCO ₂ e

2.2 Involved Parties, Coordinating / managing entity(ies), Project Participants of the PoA and operators of individual CPAs

The following parties to the Kyoto Protocol and project participants are involved in this PoA (Table 2-2).

Table 2-2: PoA Parties and project participants

	Name of Party/ies	Name of the Entity/ies	Private or Public	CME
Host Country/ies	P.R. China	Wuhan Tianying Environmental Engineering Co., Ltd.	Private	<input checked="" type="checkbox"/>
Annex 1 Country/ies	United Kingdom of Great Britain and Northern Ireland	A&T Carbon Asset Co., Limited	Private	<input type="checkbox"/>

2.3 Characteristics of rcCPA

The details of the 1st (real case) CPA is (are listed) in table 2-3.

Table 2-3: Characteristics of rcCPA

No.	CPA Details
CPA No.:	0001
CPA title:	Animal Manure Treatment Programme in Hubei Province--CPA-0001
CPA Host Country / Region:	Hubei Province, P.R. China
Operator / Implementer:	Hubei Chuyue Breeding Farm
CPA location / address:	Xinsheng village, Fangfan town, Dawu County, Xiaogan City
Geographical coordinates:	114.1206°E, 31.4287°N

2.4 Technical Programme Description

The PoA is located in Hubei province, P.R. China, which is coordinated and managed by Wuhan Tianying Environmental Engineering Co., Ltd. (CME).

The manure from livestock farm(s), which would be left to decay anaerobically without methane recovery and destruction in baseline scenario, will be firstly collected and fed into an adjustment pool. Once the designed fermentation proportion fulfils the designated specification, the manure will be then fed into an anaerobic digester. The organic matter will be converted into biogas under designed anaerobic conditions. The biogas will be utilized as fuel for energy generation in Hubei province.

The residue from the anaerobic treatment system will be collected for land application.

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the PoA consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the following programme documents:
 - the **CDM-PoA-DD (incl. generic CDM-CPA-DD)**
 - the **Real-Case CDM-CPA-DD**
- Desk review of the abovementioned PDDs and supporting documents
- Validation planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft validation reporting
- Resolution of corrective actions (if any)
- Final validation reporting
- Technical review
- Final approval of the validation

3.2 Contract review

To assure that

- the PoA falls within the scopes for which accreditation is held,
- the necessary competences to carry out the validation can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities, a validation team, consisting of one team leader and two additional team members, as well as the Technical Review personnel were appointed.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Host country Competence	On-site visit
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Huang Jie	TÜV NORD China	TL	SA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Walter Urich	TÜV NORD Cert	TM ^{A)}	LA	<input checked="" type="checkbox"/>	15.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Yu Miao	TÜV NORD China	TM ^{A)}	LA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Yu Weiming	TÜV NORD China	OR ^{B)}	LA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	-
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Stöhr, Christina	TÜV NORD Cert	TR ^{B)}	LA	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Stefan Winter	TÜV NORD Cert	TR ^{B)}	SA	<input checked="" type="checkbox"/>	15.2	<input type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Jochen Schubert	TÜV NORD Cert	FA ^{B)}	SA	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	-

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...) TA15.2: Animal waste management

⁵⁾ In case of verification projects

^{A)} Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

^{B)} No team member

All team members contributed to the review of documents, the assessment of the programme activity and to the preparation of this report under the leadership of the team leader.

Technical Experts contributed to the assessment of special aspects of the programme activity, e.g. technical or host country aspects.

In order to qualify further personnel the project team was accompanied by observers and/or trainees as indicated in the table above. They are usually not considered as team members.

Statements of competence for the above mentioned team members are enclosed in annex 8 of this report.

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures the draft PoA-DDs, as received from the project participants, have been made publicly available on the dedicated UNFCCC CDM website prior to the commencement of the validation activity. Stakeholders have been invited to comment on the PoA-DDs within the 30 days public commenting period.

In case comments are received, they are taken into account during the validation process. The comments and the discussion of the same are documented in annex 6 of this report.

3.5 Validation Protocol

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from validating the identified criteria. The validation protocol reflects the generic CDM requirements each CDM project has to meet as well as PoA specific issues as applicable. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements that a CDM PoA is expected to meet;
- It ensures a transparent validation process where the validating entity will document how a particular requirement has been validated and the result of the determination.

The validation protocol is described in Figure 1.

Validation Protocol Table A-1: Requirement checklist				
Checklist Item	Reference	Validation Team Comment	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further</i>	<i>Gives reference to the information source on which the assessment is</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the validation team and how the assessment was carried out. The</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is</i>	<i>In case a corrective action or a clarification the final assessment at the final validation</i>

Validation Protocol Table A-1: Requirement checklist				
<i>sub-divided as per the requirements of the topic and the individual project activity.</i>	<i>based on</i>	<i>reporting requirements of the VVS shall be covered in this section.</i>	<i>raised. The assessment refers to the draft validation stage.</i>	<i>stage is given.</i>

Figure 1: Validation protocol table

The completed validation protocol is enclosed in Annex 1 to this report.

3.6 Review of Documents

The published PoA-DDs and supporting background documents related to the programme design and baseline were reviewed.

Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

3.7 Site Visit and Follow-up Interviews

The validation team has carried out a site visit in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the PoA with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
1. Specific project participant representatives, CPA-0001, Hubei Chuyue Breeding Farm /IM01/	<ul style="list-style-type: none"> - Chronological description of the programme activity with documents of key steps of the implementation. - Current status of programme design - Technical details of the programme realization, programme feasibility, designing, operational life time, monitoring of the programme - Host Government Approval - Approval procedures and status - Monitoring and measurement equipment and system. - Financial aspects - Crediting period - Programme activity starting date - CER allocation / ownership - Baseline study assumptions - Additionality
2. Coordinating and Managing Entity, CME, Wuhan Tianying Environmental Engineering Co., Ltd. /IM02/	
3. Local stakeholders /IM03/	
4. CERs buyer, A&T Carbon Asset Co., Limited	

Interviewed Persons / Entities	Interview topics
/IM04/	<ul style="list-style-type: none"> - Sustainable development issues - Monitoring of CPAs - Analysis of local stakeholder consultation - Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting - National Legislation - Editorial issues of the PoA-DD and CPA-DD - Procedural aspects - Baseline study and additionality - Details of emissions reduction calculation - Crediting period - The environment impact of the PoA - The legislative aspects of the project - The impact of the project to livelihoods of the local residents

A comprehensive list of all interviewed persons is part of section 7 'References'.

3.8 Project comparison

The validation team has compared the proposed CDM PoA with similar PoA or CDM projects or technologies that have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information esp. regarding:

- Programme technology
- Additionality issues
- Reasons for reviews, requests for reviews and rejections within the CDM registration process.

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the programme documentation which will have a direct influence the programme results,
- the requirements deemed relevant for validation of the PoA with certain characteristics have not been met or
- there is a risk that the PoA would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A Clarification Request (CL) will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A Forward Action Request (FAR) will be issued when certain issues related to project implementation should be reviewed during the first verification.

3.9.2 Draft Validation Reporting

After reviewing all relevant documents and taking all other relevant information into account, the validation team issues all findings in the course of a draft validation report and hands this report over to the project proponent in order to respond on the issues raised and to revise the programme documentation accordingly.

3.9.3 Final Validation Reporting

The final validation starts after issuance of the proposed corrective action (CA) of the CARs, CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the validation team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification. The validation team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

3.10 Technical review

Before submission of the final validation report a technical review of the whole validation procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this PoA falls under. The technical reviewer is not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive validation opinion).

4 VALIDATION FINDINGS

In the following table the findings from the desk review of the published PoA-DD and generic component of the POA-DD, visits, interviews and supporting documents are summarised:

Table 4-1: Summary of CARs, CLs and FARs issued

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
Part I: CDM-PoA-DD			
Description of project activity (PoA-A): <ul style="list-style-type: none"> - PoA and CPA specification - Technical PoA and CPA description - CPA Eligibility criteria - Project Participants Technologies and/or measures 	1	2	0
Application of selected approved baseline and monitoring methodology (PoA-B) <ul style="list-style-type: none"> - Application of the Methodology to the PoA and a typical CPA - Programme Boundary and locations - Baseline identification - Calculation of GHG emission reductions <ul style="list-style-type: none"> Project emissions Baseline emissions Leakage - Additionality determination of the PoA - Monitoring Methodology - Monitoring Plan - Project management planning 	1	0	0
Duration and Crediting Period of the PoA (PoA-C)	1	0	0
Environmental impacts (PoA-D)	1	0	0
Local Stakeholder Consultation (PoA-E)	0	0	0
Approval, Authorization and other aspects (PoA-F): <ul style="list-style-type: none"> - Letter of Approval - Contribution to sustainable development - MoC - PoA-DD editorial aspects 	0	0	0

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
Part II: Generic CDM-CPA-DD			
Overall Consistency with finalized PoA-DD			
General description of the CPA (CPA-A) - Responsible entity/individual for the CPA - Identification and description of the CPA - Technical description of the CPA	1	0	0
Eligibility of CPA and Estimation of Emission Reductions (CPA-B) - CPA reference to the PoA - Justification to CPA inclusion eligibility criteria - Demonstration of CPA additionality - Confirmation of CPA boundary - CPA Emission Reduction - CPA Monitoring Plan	0	0	0
Duration and Crediting Period of the CPA (CPA-C)	0	0	0
Environmental impacts (CPA-D)	0	0	0
Local Stakeholder Consultation (CPA-E)	0	0	0
SUM	5	2	0

¹⁾ The letters in brackets refer to the validation protocol

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all validation items it should be referred to the validation protocols (see Annex 1).

The findings of validation process are summarized in the tables below.

Finding	A1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD ver. 04, A.2, A.6: The utilization of the recovered from biogas is not clearly addressed. Associated checklist question(s): A.1.1, A.1.3, A.3.2.		

Finding	A1								
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>Biogas storage tank will be used to achieve that in case of emergency all methane produced from anaerobic digestion can be stored but not emitted to atmosphere, and therefore ensure that all methane produced by the digester is destroyed. Besides, it is also possible that flaring system is installed in some activities and in this case, open flaring or closed flaring will be adopted based on each owner's opinion.</p> <p>By recovery and utilization of biogas, the PoA can contribute to the reduction of greenhouse gases in 2 ways: 1) the biogas recovery system reduces methane emission into atmosphere; 2) the recovered biogas replaces conventional fossil fuels for energy generation, and therefore avoids CO₂ emissions from energy generation by the fossil fuel. However, for the sake of conservativeness and simplification, the proposed PoA will only claim emission reductions from the avoidance of methane emission due to the existing AWMS. No CERs will be claimed for substituting fossil fuel by biogas for energy generation.</p> <p>The information above has been added in the updated PoA-DD.</p> <table border="1"> <tr> <td><input checked="" type="checkbox"/></td><td>Changes in PDD</td><td>Section(s): Part I: A.2 Part II: A.1</td><td>New version No.: 05</td></tr> <tr> <td><input type="checkbox"/></td><td>Changes in XLS</td><td>Worksheet(s):</td><td>New version No.:</td></tr> </table>	<input checked="" type="checkbox"/>	Changes in PDD	Section(s): Part I: A.2 Part II: A.1	New version No.: 05	<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/>	Changes in PDD	Section(s): Part I: A.2 Part II: A.1	New version No.: 05						
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:						
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>Upon checking the PoA-DD and according to on-site investigation, it is confirmed that:</p> <p>The biogas will be utilized for energy generation/ flaring to ensure that biogas will not be emitted into the atmosphere.</p> <p>Regardless the utilization manner of the energy from biogas, the CME will ensure that the biogas is fully used and will not claim emission reductions from the energy utilization of type I.</p> <p>Hence this CAR is closed.</p>								
Conclusion <i>Tick the appropriate checkbox</i>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>								

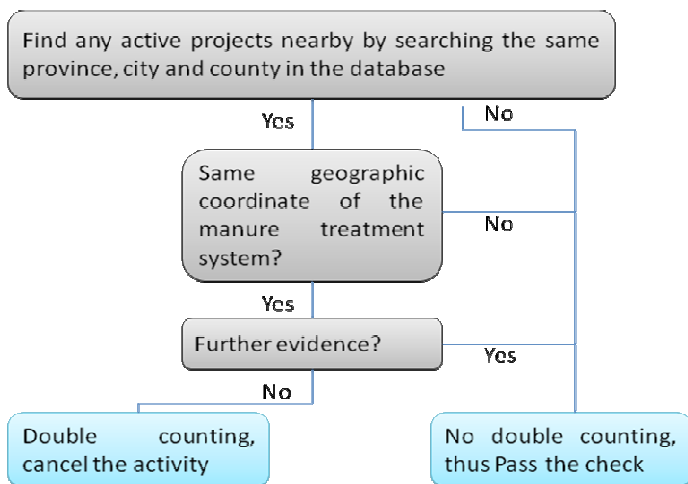
Finding	A2
Related DDs	<input checked="" type="checkbox"/> PoA-DD <input type="checkbox"/> generic CPA-DD <input type="checkbox"/> real case CPA-DD
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>The track of the republication of the DDs is not clear.</p> <p>Associated checklist question(s): A.1.1.</p>
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is</i>	<p>The version 01 of PoA-DD was completed in 17/08/2011 and was GSP on 02/09/2011. And the version 01 of PoA-DD was updated to version 02 and then version 03 based on CAR&CL. The version 03 was ready to submit to EB for registration together with FVR. However, uploading can not be conducted due to change of applied</p>

Finding	A2			
requested to indicate the revised sections as well as the new version No.	methodologies. Afterwards, version 04 was completed for the second GSC and was uploaded for the second GSC on 23/11/2012.			
	The track regarding republishing has been listed in the Section A.1.			
	<input type="checkbox"/>	Changes in PDD	Section(s): Part I: A.2	New version No.:
	<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>Upon checking the revised PoA-DD and information received form that UNFDCCC (via mail) and checking the UNFCCC website, it is confirmed that: The PoA-DD and CPA-DD ver. 01 was 1st published on the UNFCCC website on 2011-09-02. The methodology AMS-III.D and AMS-I.C were applied in DDs.</p> <p>As per revisions that came up in EB 70 Annex 5, “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” which allowed the multiple combinations of methodologies AMS-I.D and AMS-I.F were added in the PoA. The POA covered then AMS-III.D, AMS-I.C, AMS-I.D and AMS-I.F. A methodology change compared with the 1st GSP PoA-DD on 2011-09-02 was observed. According to paragraph 19 of <i>Clean development mechanism project cycle procedure</i> ver. 02.0: <i>‘19. If the project participants or the coordinating/managing entity wish to change the approved baseline and monitoring methodology applied in the PDD or PoA-DD that has already been published for global stakeholder consultation, they shall revise the PDD or PoA-DD, and the DOE shall subsequently publish the revised PDD or POA-DD for global stakeholder consultation in accordance with paragraphs 13-14 above’.</i> Therefore the PoA-DD was republished on 2012-11-23.</p> <p>However in order to simplify the emission reduction calculation and accelerate the registration process only AMS-III.D was applied in PoA. The POA will only claim emission reductions from type III. The CME won’t claim the emission reduction from type I of energy utilization from biogas.</p> <p>Hence this CAR is closed.</p>			
Conclusion <i>Tick the appropriate checkbox</i>	<div><input type="checkbox"/> To be checked during the first periodic verification</div> <div><input type="checkbox"/> Additional action should be taken (finding remains open)</div> <div><input checked="" type="checkbox"/> The finding is closed</div>			

Finding	A3		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP does not explain the contractual situation between swine farm, biogas plant owner and CME and a proper justification is missing in DD section A.2. Associated checklist question(s): A.1.1.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	A contract will be signed between the CME and the biogas plant owner prior to the date the biogas plant is included in the PoA, to conform that: (a) They are aware of and have agreed that their activity is being subscribed to the PoA. (b) They have neither already been registered as a CDM project, nor as a CPA of another PoA.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): Part I: A.2	New version No.: 05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Upon checking the PoA-DD ver. 05 and checking the contracts, it is confirmed that: The contract between the CME and biogas plant is and will be in place to make sure the CME obtain the data base of the biogas plant. The management of the contracts and the relationship was correctly and transparently addressed in section 4.4 of PoA-DD. Hence this CL is assessed as closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD, ver. 04, B.2, C: The EC 19 for inclusion of a CPA wasn't justified as per <i>Guidelines on Assessment of Debundling for SSC Project Activities</i> (Ver. 3 EB54/Annex 13). Associated checklist question(s): A.3.5.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	The EC 19 has been revised to "The CPA is not a de-bundled component of a large scale activity. De-bundling check will be implemented according to " <i>Guidelines on assessment of debundling for SSC project activities</i> "." Accordingly, the Section C (iii) has also been updated based on the Guidelines.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): B.2, C	New version No.: 05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:

Finding	B1
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>Upon checking the PoA-DD ver. 05 and the guideline on assessment of debundling for SSC project activities, it is confirmed that:</p> <p>This criterion corresponds to paragraph 16(l) EB70 Annex 5.</p> <p>The <i>Guidelines on assessment of debundling for SSC project activities</i> (ver. 03, EB 54 Annex 13) was applied for debundling identification, this criterion ensures that the potential CPA is not a de-bundled component of a large scale activity.</p> <p>Hence this CL is assessed as closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	C1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>PoA-DD, ver. 04, C:</p> <ol style="list-style-type: none"> The personnel designed in figure 3 is inconsistent with the description in the table below the figure 3. The procedure for avoiding double counting wasn't transparently established. <p>Associated checklist question(s): B.7.1.3.</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ol style="list-style-type: none"> "person in charge of CPA" has been revised to "CPA manager" in the figure 3, which is in line with the description. Also, the responsibility of PoA manager has been added in the table below the figure 3. The figure for the procedure for avoiding double counting has been updated As below: <div style="border: 1px dashed black; padding: 10px; margin: 10px 0;">  <pre> graph TD A[Find any active projects nearby by searching the same province, city and county in the database] -- Yes --> B[Same geographic coordinate of the manure treatment system?] A -- No --> D[No double counting, thus Pass the check] B -- Yes --> C[Further evidence?] B -- No --> D C -- Yes --> D C -- No --> E[Double counting, cancel the activity] </pre> </div>		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s): Part I. C, Part II, B.7.2.	New version No.: 05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:

Finding	C1
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>Upon checking the PoA-DD ver. 05 and according to interview with the CME, it is confirmed that:</p> <ol style="list-style-type: none"> 1. The operational and management structure was appropriately established. 2. The procedure for avoiding double counting was clearly addressed in PoA-DD section C. The internal and external information regarding the project activity in CPA was employed for inclusion of the potential CPA. <p>Hence this CAR is assessed as closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	D1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD, ver. 04, D: The start date of the PoA wasn't reasonably defined. Associated checklist question(s): C.1.3.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	The start date of the PoA has been revised back to "01/02/2013". <input type="checkbox"/> Changes in PDD Section(s): D.1, B.2 New version No.: <input type="checkbox"/> Changes in XLS Worksheet(s): New version No.:		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>Upon checking the PoA-DD ver. 05 and checking the glossary of terms and VVS, it is confirmed that:</p> <p>According to Glossary of terms EB 70 Annex 7 version 7 the starting date of a PoA is defined as the date on which the coordinating/managing entity officially notifies the secretariat and the DNA of their intention to seek the CDM status or the date of publication of the PoA-DD for global stakeholder consultation. For this PoA this would be 2011-09-02. However due to problems at uploading via the UNFCCC interface providing an Error message that the date has to be 4 weeks in the future for SSC PoAs, PP has changed the starting date of the PoA to 2013-02-01. The DOE has determined that the CDM was seriously considered in the decision to implement the POA. The start date for CPA-0001 was defined as the general construction contract^{/GCC/} signed date on 2011-12-28 which is a date after webhosting PoA-DD and therefore in the future and as per onsite visit no construction began, and as this is later than the commencement of validation of the PoA, i.e., the</p>		

Finding	D1
	<p>date on which the PoA-DD is first published for global stakeholder consultation (2011-09-02), thus as per paragraph 7(d) of PoA Procedures (version 04.1, EB55 Annex 38), EB66 Annex 3 §16 (d) and paragraph 2 of Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM (EB62 Annex13) as well as VVS §194 (especially VVS version 2 §194) and §107, the DOE has determined that the CDM was seriously considered in the decision to implement the project activity.</p> <p>According to the paragraph 6(h) in <i>Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities</i> (version 04.1, EB 55 Annex 38): length of the crediting period for PoA not exceeding 28 years (60 years for A/R). The duration time indicated in PoA-DD of 28 is in line with the procedure. The CPA crediting period should not exceed the duration period until 2041-01-31, which has been involved in EC 22 for inclusion of a CPA.</p> <p>Hence this CAR is assessed as closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	CPA-A1		
Related DDs	<input type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>PoA-DD, ver. 04, A.1: The purpose of the generic CPA is not developed through the three scenarios description. Associated checklist question(s): A.1.3.</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>The Section A.2 has been revised to include project scenario, existing scenario and baseline scenario. The description is as below:</p> <p>The PoA only includes one type generic CPA.</p> <p>Project Scenario: the generic CPA is to recover methane from manure treatment in livestock farms by changing the manure management practice from uncovered anaerobic lagoon to biogas digester and then to utilize the recovered biogas to generate energy.</p> <p>The Scenario prior to the implementation of the project: In the absence of the CPA, animal manure would be left to decay anaerobically without methane recovery and destruction.</p> <p>Baseline Scenario: The baseline scenario is the same as the scenario prior to the implementation of the project.</p>		

Finding	CPA-A1			
	By recovery and utilization of biogas, the CPA can contribute to the reduction of greenhouse gases in 2 ways: 1) the biogas recovery system reduces methane emission into atmosphere; 2) the recovered biogas replaces conventional fossil fuels for energy generation, and therefore avoids CO2 emissions from energy generation by the fossil fuel. However, for the sake of conservativeness and simplification, the CPA will only claim emission reductions from the avoidance of methane emission due to the existing AWMS. No CERs will be claimed for substituting fossil fuel by biogas for energy generation. This meets the framework of the PoA.			
	<input checked="" type="checkbox"/>	Changes in PDD	Section(s): PART II A.1	New version No.:
	<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Upon checking the PoA-DD ver. 05 and according to on-site investigation, it is confirmed that the purpose of the generic CPA was clearly developed through the three scenario description, the scenario existing prior to the implementation of the CPA, the baseline scenario, CPA scenario. Hence, a clear, accurate technical description of project activities within the PoA was addressed in the PoA-DD. This CAR is assessed as closed.			
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

5 VALIDATION ASSESSMENT SUMMARY

5.1 General Description of the PoA

5.1.1 Technology to be employed

By means of interviews, background research and document reviews, it can be confirmed that a clear and sufficient description of the PoA is provided in the PoA-DD covering all relevant aspects. The precise nature of the PoA and the technical aspects of its implementation are presented in an understandable manner. The description of the PoA is complete, accurate and provides an understanding of the project activities under the PoA. It is in compliance with the PoA-DD and CPA-DD templates and guidelines.

The manure from livestock farm(s), which would be left to decay anaerobically without methane recovery and destruction in baseline scenario, will firstly be collected and fed into an adjustment pool. Once the designed fermentation proportion fulfils the designated specification the manure will be fed into an anaerobic digester. The organic matter will be converted into biogas under designed anaerobic conditions. Regardless the utilization manner of the biogas, the CME will not claim the emission reduction from type I but only from type III.

The residue from the anaerobic treatment system will be collected and used for land application.

5.1.2 Small Scale PoAs

Every proposed CPA under this PoA fulfils the criteria below as per the type III of projects activities stipulated in AMS-III.D ver. 18.0,

The emission reductions created from methane recovery for each CPA will be lower than the threshold of 60,000tCO_{2e}/yr. The annual emission reductions of the first proposed CPA is estimated to 3,663 tCO_{2e}, which is less than 60kt CO_{2e} annually. Therefore the proposed project is a small scale PoA.

This criteria regarding the threshold is involved in the EC of inclusion of a CPA within the PoA. When the specific CPA fulfils the EC stipulated in section D.5 of PoA-DD it can be considered as SSC-CPA under the PoA.

The DOE has also checked and confirms that the CME has substantiated that the CPA is not a de-bundled component of large scale project through application of "Guidelines on Assessment of Debundling for SSC Project Activities". The non-debundling demonstration was involved as no. 19 of EC for inclusion of a CPA. The procedures stipulated in *Guidelines on assessment of debundling for SSC project activities* ver. 03 EB54 Annex 13 will be followed in potential CPA identification.

5.1.3 Definition of a typical Component Project Activity (CPA)

All necessary information are consistent between the finalized PoA-DD and the generic component of the POA-DD. The appropriate, objective and verifiable eligibility criteria have been defined and included in the PoA-DD. It includes all necessary requirements as stipulated in paragraph 14 of *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities* ver. 02.0 EB70 Annex 5. For details please refer to the assessment of EC in Annex 7 of eligibility criteria assessment.

The usability of EC to assess the inclusion of CPAs been demonstrated in the generic CPA-DD. For detail please refer to Annex 7 of the validation report.

5.2 PoA Baseline

5.2.1 Application of the Methodology

The project applied the CDM SSC methodology AMS-III.D: methane recovery in animal manure management systems ver. 18.0, the referenced tools are as follow:

Tool to determine project emission from flaring gases containing methane” ver. 01.

Tool to calculate the emission factor for an electricity system” ver. 02.2.1.

Tool for the demonstration and assessment of additionality. Ver. 06.0

AMS-III.AO: “Methane recovery through controlled anaerobic digestion” ver. 01

They were all cited from the following UNFCCC CDM website:

<http://cdm.unfccc.int/methodologies/SSCmethodologies/approved>

Furthermore, all applicability conditions of the applied methodology have been met and the PoA design is in line with all requirements and stipulations mentioned in all sections of the applied methodology. Besides, the PoA design is not expected to result in emissions including project emissions, leakage, and any other significant emissions not addressed by the applied methodology.

5.2.2 PoA Boundary and CPA Boundary

The boundaries (geographically and related to GHG sources / sinks) are correctly given in section D.3 of the generic component of the POA-DD. The physical/geographical boundary of the PoA is Hubei Province, P.R. China.

As per methodology AMS-III.D, the CPA boundary within PoA is the physical, geographical site of livestock, animal manure management system (including centralized manure treatment plant where applicable) and facilities which recover and flare/combust or use methane.

The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA.

Through observations of the physical site, the DOE confirms that the definition of the CPA boundary in PoA-DD is in accordance with the requirement of the methodology. It is also confirmed by the DOE by means of investigation during on-site visit that all sources and GHGs included in the PoA boundary are addressed as required in the applied methodology.

5.2.3 Baseline Identification

The procedure to identify the most plausible baseline scenario derived from applied methodology has been applied correctly and is transparently and sufficiently documented in the POA-DD.

As described in AMS-III.D, for animal manure management the baseline scenario is the situation where, in the absence of the project activity, animal manure is left to decay anaerobic within the project boundary and methane is emitted into atmosphere.

Therefore the baseline scenario for the PoA is livestock manure is treated in open anaerobic lagoons and the biogas generated is directly emitted into atmosphere. The description of baseline identification in the PoA-DD is transparent and verifiable.

5.2.4 Algorithms and formulae used to determine emission reductions

Methodologies for calculating the emission reductions were documented. The PoA intends to reduce GHG emission by biogas recovery in anaerobic digester for energy generation. The emission reduction calculation is conducted as per applied methodology, the referenced tool are also applied. In order to simplify the calculation process, only the emission reduction from type III of methane capture was considered. The emission reduction from type I won't be claimed by CME. Correct equations and parameters have been used.

Baseline Emission = Baseline emissions due to methane recovery in year y

According to paragraph 9 in AMS-III.D, two options are available for calculation, option (a) was chosen for CPA as following:

$$BE_y = GWP_{CH_4} * D_{CH_4} * UF_b * \sum_{j,LT} MCF_j * B_{0,LT} * N_{LT,y} * VS_{LT,y} * MS\%_{Bl,j}$$

Where

BE_y	Baseline emissions due to biogas recovery in year y (tCO _{2e})
GWP_{CH_4}	Global Warming Potential (GWP) of CH ₄ (21 tCO _{2e} /tCH ₄)
D_{CH_4}	CH ₄ density (0.00067 t/m ³ at 20°C and 1 atm pressure)
LT	Index for all types of livestock

j	Index for animal manure management system
MCF_j	Annual methane conversion factor for the baseline animal manure management system j
$B_{0,LT}$	Maximum methane producing potential of the volatile solid generated for animal type LT
$N_{LT,y}$	Annual average number of animals of type LT in year y
$VS_{LT,y}$	Volatile solids for livestock LT entering the animal manure management system in year y (on a dry matter weight basis, kg dm/animal/year)
$MS\%_{Bl,j}$	Fraction of manure handled in baseline animal manure management system j
UF_b	Model correction factor to account for model uncertainties (0.94, Reference: FCCC/SBSTA/2003/10/Add.2, page 25)

Determination of $B_{0,LT}$:

According to AMS-III.D, the maximum methane-producing capacity of the manure (B_0) varies by species and diet. Since country-specific values are unavailable, default value from Table 10A-4 to 10A-8, 2006 IPCC for National Greenhouse Gas Inventories volume 4 Chapter 10 is applied.

Determination of $VS_{LT,y}$:

As stated in AMS-III.D, *Volatile solids (VS) are the organic material in livestock manure and consist of both biodegradable and non-biodegradable fractions. For the calculations the total VS excreted by each animal species is required. The preferred method to obtain VS is to use data from nationally published sources. These values shall be compared with IPCC default values and any significant differences shall be explained. If data from nationally published sources are not available, country-specific VS excretion rates can be estimated from feed intake levels, via the enhanced characterisation method (tier 2) described in section 10.2 in 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 chapter 10. If country specific VS values are not available IPCC default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 chapter 10 table 10 A-4 to 10 A-9 can be used provided that the project participants assess the suitability of those data to the specific situation of the treatment site particularly with reference to feed intake levels. The default IPCC values for VS are adjusted for a site-specific average animal weight as following:*

$$VS_{LT,y} = \left(\frac{W_{site}}{W_{default}} \right) * VS_{default} * nd_y$$

Where:

W_{site}	Average animal weight of a defined livestock population at the project site
$W_{default}$	Default average animal weight of a defined population, this data is sourced from IPCC 2006

$VS_{default}$ Default value for the volatile solid excretion rate per day on a dry-matter basis for a defined livestock population

nd_y Number of days in year y where the animal manure management system is operational

Determination of MCF_j :

As stated in AMS-III.D, methane conversion factor is determined for a specific manure management system and represent the degree to which B_0 is achieved. Where available country-specific MCF values that reflect the specific management systems used in particular countries or regions shall be used. Alternatively, the IPCC default values provided in table 10.17 of 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 Chapter 10 can be used.

The Table 10A-4 to 10A-9 presents a combination of MCF, B_0 and VS.

For a specific CPA, for example Table 10A-7 for market swine as following:

Table 10A-7 Manure Management Methane Emission Factor Derivation for Market Swine											
Annual Average Temperature (°C)			Manure Management System MCFs								
			Lagoon ¹	Liquid/ Slurry ¹	Solid Storage	Drylot	Pit <1 month	Pit >1 month	Daily Spread	Digester	Other
Cool	10		66%	17%	2.0%	1.0%	3.0%	17%	0.1%	10.0%	1.0%
	11		68%	19%	2.0%	1.0%	3.0%	19%	0.1%	10.0%	1.0%
	12		70%	20%	2.0%	1.0%	3.0%	20%	0.1%	10.0%	1.0%
	13		71%	22%	2.0%	1.0%	3.0%	22%	0.1%	10.0%	1.0%
	14		73%	25%	2.0%	1.0%	3.0%	25%	0.1%	10.0%	1.0%
Temp	15		74%	27%	4.0%	1.5%	3.0%	27%	0.5%	10.0%	1.0%
	16		75%	29%	4.0%	1.5%	3.0%	29%	0.5%	10.0%	1.0%
	17		76%	32%	4.0%	1.5%	3.0%	32%	0.5%	10.0%	1.0%
	18		77%	35%	4.0%	1.5%	3.0%	35%	0.5%	10.0%	1.0%
	19		77%	39%	4.0%	1.5%	3.0%	39%	0.5%	10.0%	1.0%
	20		78%	42%	4.0%	1.5%	3.0%	42%	0.5%	10.0%	1.0%
	21		78%	46%	4.0%	1.5%	3.0%	46%	0.5%	10.0%	1.0%
	22		78%	50%	4.0%	1.5%	3.0%	50%	0.5%	10.0%	1.0%
	23		79%	55%	4.0%	1.5%	3.0%	55%	0.5%	10.0%	1.0%
	24		79%	60%	4.0%	1.5%	3.0%	60%	0.5%	10.0%	1.0%
	25		79%	65%	4.0%	1.5%	3.0%	65%	0.5%	10.0%	1.0%
Warm	26		79%	71%	5.0%	2.0%	30.0%	71%	1.0%	10.0%	1.0%
	27		80%	78%	5.0%	2.0%	30.0%	78%	1.0%	10.0%	1.0%
	28		80%	80%	5.0%	2.0%	30.0%	80%	1.0%	10.0%	1.0%
Region	Market Swine Characteristics			Manure Management System Usage (MS%)							
	Mass ^a kg	B_0^b m ³ CH ₄ /kg VS	VS ^c kg/hd/day								
North America	46	0.48	0.27	32.8%	18.5%	4.2%	4.0%	0.0%	40.6%	0.0%	0.0%
Western Europe	50	0.45	0.3	8.7%	0.0%	13.7%	0.0%	2.8%	69.8%	2.0%	3.0%
Eastern Europe	50	0.45	0.3	3.0%	0.0%	42.0%	0.0%	24.7%	24.7%	0.0%	5.7%
Oceania	45	0.45	0.28	54.0%	0.0%	3.0%	15.0%	0.0%	0.0%	0.0%	28.0%
Latin America	28	0.29	0.3	0.0%	8.0%	10.0%	41.0%	0.0%	2.0%	0.0%	40.0%
Africa	28	0.29	0.3	0.0%	6.0%	6.0%	87.0%	1.0%	0.0%	0.0%	0.0%
Middle East	28	0.29	0.3	0.0%	14.0%	0.0%	69.0%	0.0%	17.0%	0.0%	0.0%
Asia	28	0.29	0.3	0.0%	40.0%	0.0%	54.0%	0.0%	0.0%	7.0%	0.0%
Indian Subcontinent	28	0.29	0.3	9.0%	22.0%	16.0%	30.0%	3.0%	0.0%	9.0%	3.0%

For MCF_j , the site annual average temperature is taken from official data at the nearest meteorological station or historical on site observations and the manure decay system should be considered for MCF_j selection from IPCC.

$B_{0,LT}$, $VS_{LT,y}$ are determined based on the livestock species and original of the livestock.

Determination of $N_{LT,y}$

According to AMS-III.D, the annual average number of animals ($N_{LT,y}$) are determined as follows:

$$N_{LT,y} = N_{da,y} * \left(\frac{N_{p,y}}{365} \right)$$

Where:

$N_{da,y}$ Number of days animal is alive in the farm in the year y

$N_{p,y}$ Number of animals produced annually of type LT for the year y

Project Emission:

According to AMS-III.D, the project emission consist of:

$$PE_y = PE_{PL,y} + PE_{flare,y} + PE_{power,y} + PE_{trans,y} + PE_{storage,y}$$

Where:

PE_y Project emissions in year y (tCO₂e)

$PE_{PL,y}$ Emissions due to physical leakage of biogas in the manure management system which includes protection, collection and transport of biogas to the point of flaring/combustion or gainful use

$PE_{flare,y}$ Emissions from flaring or combustion of the biogas stream

$PE_{power,y}$ Emission from the use of fossil fuel or electricity for the operation of the installed facilities

$PE_{trans,y}$ Emission from incremental transportation, as per relevant paragraph in AMS-III.AO

$PE_{storage,y}$ Emissions from the storage of manure

➤ $PE_{PL,y}$

According to paragraph 13 of AMS-III.D ver. 18, two methods are available for calculation, option (i) under method (a) was chosen and the calculation formular is as following:

$$PE_{PL,y} = 0.10 * GWP_{CH_4} * D_{CH_4} * \sum_{i,LT} B_{o,LT} * N_{LT,y} * VS_{LT,y} * MS\%_{i,y}$$

Where:

$MS\%_{i,y}$ Fraction of manure handled in system i in year y . All the livestock manure will be treated in the system. It will be monitored during the implementation of the CPA within PoA.

➤ **PE_{flare,y}**

In case of flaring/combustion of biogas, the project emission is calculated according to *Tool to determine project emissions from flaring gases containing methane* ver. 01.

$$PE_{flare,y} = \sum_{h=1}^{8760} TM_{RG,h} \times (1 - \eta_{flare,h}) \times \frac{GWP_{CH_4}}{1000}$$

Where:

$TM_{RG,h}$ Mass flow rate of methane in the residual gas in the hour h (kg/h)
 $\eta_{flare,h}$ Flare efficiency in hour h; 0 is used for this parameter. This is conservative.

$$TM_{RG,h} = FV_{RG,h} \times fv_{CH_4, RG,h} \times \rho_{CH_4,n}$$

Where:

$FV_{RG,h}$ Volumetric flow rate of the residual gas in dry basis at normal conditions in hour h
 $fv_{CH_4, RG,h}$ Volumetric fraction of methane in the residual gas on dry basis in hour h
 $\rho_{CH_4,n}$ Density of methane at normal conditions (0.00067 t/m³ at 20°C and 1 atm pressure)

According to the applied tool, the value for the parameters $FV_{RG,h}$ and ρ_{CH_4} should be determined on the same basis. Actually, the volumetric flow rate $FV_{RG,h}$ can only be monitored at the project condition. Therefore, the density of methane at the project condition should be calculated as per Ideal Gas Equation:

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$$

Hence

$$D_{CH_4,PJ} = 0.00067 \times \frac{293K \times P_{PJ}}{1.atm \times (273K + T_{PJ})}$$

Where:

$D_{CH_4,PJ}$ Density of methane under the CPA condition within PoA
 T_{PJ} Temperature of the biogas at the flow measurement site;
 P_{PJ} Pressure of the biogas at the flow measurement site

➤ **PE_{power,y}**

As non involvement of fossil fuel is set as one EC, according to AMS-III.D, project emission from electricity consumption is determined as per the procedures described in AMS-I.D as follow:

$$PE_{power,y} = EC_{PJ,y} \times EF_{grid,CM,y}$$

Where:

$EC_{PJ,y}$ Quantity of electricity consumed by the Project

$EF_{grid,CM,y}$ Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the “*Tool to calculate the emission factor for an electricity system*” ver. 02.2.1.

According to ‘Tool to calculate the emission factor for an electricity system’ Ver.02.2.1. The grid emission factor was determined ex-ante and estimated as a combined margin emission factor ($EF_{grid,CM,y}$) taking into account the operating margin emission factor ($EF_{grid,OM,y}$) and built margin emission factor ($EF_{grid,BM,y}$).

The calculation methods are derived from the guidance issued by the Chinese DNA on 2006-12-15 and the Tool to calculate the emission factor for an electricity system. The National Development and Reform Commission of People’s Republic of China calculates $EF_{grid,OM,y}$ and $EF_{grid,BM,y}$ for each sub-grid and renews the results every year. The latest data prior to the POA-DD-GSP published on 2012-10-17 were used /dna/.

$EF_{grid,OM,y}$ calculation: Due to the fact that the low-cost must-run resources constitute less than 50% to the total grid generation and that data for “Dispatch Data Analysis” is not available, the simple OM emission factor ($EF_{grid,OM,y}$) calculation method is chosen. The OM factor is calculated as generation-weighted average emissions per electricity unit of all generating sources serving the system (not including the low-cost and must-run power plants) of three years average data (2008-2010). The $EF_{grid,OM,y}$ is calculated to be 0.9944 tCO_{2e}/MWh.

$EF_{grid,BM,y}$ calculation: Due to the data unavailability at the power plant level in China and in accordance to the “clarification on use of approved methodology AM0005 for several projects in China” from EB, the build margin is calculated as following¹:

1. Calculating the share of CO₂ emissions of different fuel-fired power plants in the total CO₂ emissions, including coal, oil and gas.
2. The BM is calculated as: 0.4733 tCO_{2e}/MWh.

In accordance with the “*Tool to calculate the emission factor for an electricity system*” (Ver. 02.2.1) weight factors of $w_{OM} = w_{BM} = 0.5$ were used to calculate $EF_{grid,CM,y}$.

$$\begin{aligned} EF_{grid,CM,y} &= 0.5 \times EF_{grid,OM,y} + 0.5 \times EF_{grid,BM,y} \\ &= 0.73385 \text{ tCO}_2\text{e/MWh} \end{aligned}$$

The grid emission factor will be fixed during the first crediting period.

The validation team is convinced of the result of the emission coefficient calculation. It is deemed to be adequate and transparent. All data required for emission the coefficient calculation were derived from publicly available data of the Chinese government^{1/GEF/}.

¹ <http://cdm.unfccc.int/Projects/deviations/87512>

➤ **PE_{transp,y}**

According to AMS-III.D ver. 18, the relevant procedure for project emission calculation from incremental transportation is cited from AMS-III.AO ver. 01 as following:

$$PE_{transp,y} = (Q_y / CT_y) * DAF_w * EF_{CO_2} + (Q_{y,treatment} / CT_{y,treatment}) * DAF_{treatment} * EF_{CO_2}$$

Where:

Q_y	Quantity of raw waste/manure treated and/or wastewater co-treated
CT_y	Average truck capacity for transportation
DAF_w	Average incremental distance for raw solid waste/manure and/or wastewater transportation
EF_{CO_2}	CO ₂ emission factor from fuel use due to transportation (kgCO ₂ /km, IPCC default values or local values may be used)
$Q_{y,treatment}$	Quantity of product produced in year y
$CT_{y,treatment}$	Average truck capacity for product transportation
$DAF_{treatment}$	Average distance for product transportation

➤ **PE_{storage,y}**

According to paragraph 16 of AMS-III.D, *project emissions on account of storage of manure before being fed into the anaerobic digester shall be accounted for if both condition (a) and (b) below are satisfied:*

- (a) *The storage time of the manure after removal from the animal barns, including transportation, exceeds 24 hours before being fed into the anaerobic digester; and*
- (b) *The dry matter content of the manure when removed from the animal barns is less than 20%.*

The following method can be used to calculate project emissions from manure storage:

$$PE_{storage,y} = GWP_{CH_4} * D_{CH_4} * \sum_{LT,l} \left[\frac{365}{AI_l} \sum_{d=1}^{AI_l} (N_{LT,y} * VS_{LT,d} * MS\%_l * (1 - e^{-k * (AI_l - d)}) * MCF_l * B_{0_{LT}}) \right]$$

Where:

AI_l	Annual average interval between manure collection and delivery for treatment at a given storage device l
$VS_{LT,d}$	Amount of volatile solid production by type of animal LT in a day
$MS\%_l$	Fraction of volatile solids handled by storage device l

k	Degradation rate constant (0.069)
d	Days for which cumulative methane emissions are calculated; d can vary from 1 to 45 and to be run from 1 up to AI_t
MCF_t	Annual methane conversion factor for the project manure storage derived from Table 10.17, Chapter 10, Volume 4.

Leakage:

According to the applied methodology AMS-III.D ver. 18.0, no leakage needs to be considered.

Emission reductions:

Emissions reductions achieved by a specific SSC-CPA within PoA are calculated as the differences among the baseline emission (BE_y), the project emission (PE_y).

$$ER_y = BE_y - PE_y$$

According to AMS-III.D ver. 18.0, *the emission reductions achieved by avoiding methane emission will be determined ex post through direct measurement of the amount of methane fuelled, flared or gainfully used. It is likely that the project activity involved manure treatment steps with baseline situation, before the emission reductions achieved by the project activity is limited to the ex post calculated baseline emissions minus project emissions using the actual monitored data for the project activity.* Thus the emission reduction for ex post calculation is as follow:

$$ER_{y,ex-post} = \min [(BE_{y,ex-post} - PE_{y,ex-post}), (MD_y - PE_{power,y,expost})]$$

Where:

$ER_{y,ex post}$	Emission reductions achieved from the methane recovery based on the monitored values
$BE_{y,ex post}$	Baseline emissions calculated as per AMS-III.D using ex post monitored value of $N_{LT,y}$
$PE_{y,ex post}$	Project emissions calculated as per AMS-III.D using ex post monitored value.
MD_y	Methane captured and used gainfully by the project activity
$PE_{power,y,ex post}$	Emissions from the use of fossil fuel or electricity for the operation of the installed facilities based on the monitored values

$$MD_y = BG_{burnt,y} * w_{CH4,y} * D_{CH4} * FE * GWP_{CH4}$$

Where:

$BG_{burnt,y}$	The amount of biogas utilized
w_{CH4}	Methane content in biogas
$PE_{y,ex post}$	project emissions calculated as per AMS-III.D using ex post monitored value.

FE Flare efficiency in year y

The gas flow condition including the temperature and pressure can be monitored under single CPA. As per paragraph 22 of AMS-III.D ver. 18, a destruction efficiency of 100% can be used for the amount that is combusted for energy.

It is confirmed by the DOE by cross-checking the emission reduction calculation spreadsheet for a specific CPA^{XLS/} against all referenced data sources and the requirements of applied methodology and methodological tools that:

- a) All data sources and assumptions used by the CPA under PoA are listed and referenced in the PoA-DD and in line with the methodology. Calculations are correct, applicable to the proposed CDM project activity and will result in a conservative estimate of the emission reductions;
- b) All documentation used by project participants as the basis for assumptions and source of data such as China Electric Power Yearbook and 2006 IPCC Guidelines for National Greenhouse Gas Inventories is correctly quoted and interpreted in the PoA-DD;
- c) All values used in the PoA-DD are considered reasonable in the context of the proposed CDM project activity;
- d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.

5.3 Additionality Determination

5.3.1 PoA

The additionality of PoA will be assessed based on the CPA level. The additionality assessment procedure was involved as EC 16 for inclusion of a CPA. Only all the project activities involved in a CPA are demonstrated as additionally, the CPA is determined as additional. The potential CPA is qualified to meet the requirement of EC 16.

5.3.2 CPA level

Starting date / Consideration of CDM in decision making

According to Glossary of terms EB 70 Annex 7 version 7 the starting date of a PoA is defined as the date on which the coordinating/managing entity officially notifies the secretariat and the DNA of their intention to seek the CDM status or the date of publication of the PoA-DD for global stakeholder consultation. For this PoA this would be 2011-09-02. However due to problems at uploading via the UNFCCC interface

providing an Error message that the date has to be 4 weeks in the future for SSC PoAs, PP has changed the starting date of the PoA to 2013-02-01. The DOE has determined that the CDM was seriously considered in the decision to implement the POA. The start date for CPA-0001 was defined as the general construction contract^{/GCC/} signed date on 2011-12-28 which is a date after webhosting PoA-DD and therefore in the future and as per onsite visit no construction began, and as this is later than the commencement of validation of the PoA, i.e., the date on which the PoA-DD is first published for global stakeholder consultation (2011-09-02), thus as per paragraph 7(d) of PoA Procedures (version 04.1, EB55 Annex 38), EB66 Annex 3 §16 (d) and paragraph 2 of Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM (EB62 Annex13) as well as VVS §194 (especially VVS version 2 §194) and §107, the DOE has determined that the CDM was seriously considered in the decision to implement the project activity.

Additionality justification as per methodology / methodological tools

The additionality was justified in accordance with the requirements derived from "Guidelines for demonstrating additionality of microscale project activities" (version 04, EB 68 Annex 26), PoA Procedures (version 04.1, EB 55 Annex 38) and the guidance provided by "Guidelines on the demonstration of additionality of small-scale project activities" (version 09) referred therein. One of the following approaches will be used to show that the CPA is additional.

Approach 1: As per "Guidelines for demonstrating additionality of microscale project activities" (Version 4.0):

The CPA under the PoA is deemed additional if it can satisfy the microscale applicability criteria:

- the emission reductions from type III component of the project is no more than 20 ktCO_{2e} per year
- the geographic location of the project activity is in a special underdeveloped zone of the host country

Approach 2: As per positive list of technologies and project activity types in the " Guidelines on the demonstration of additionality of small-scale project activities" (Version 9.0):

The CPA under the PoA is deemed additional if it can satisfy the positive list of technologies and project activity types:

- the CPA meets the threshold criteria of a small scale CDM project activity
- the CPA is solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium enterprises (SMEs)
- the emission reductions of each unit per year are no more than 3,000 tCO_{2e}

Approach 3: As per investment barrier in the "Guidelines on the demonstration of additionality of small-scale project activities":

The CPA under the PoA is deemed additional if the IRR (after tax) of each unit is lower than the benchmark of 7%. The calculation will be in line with the "Tool for the demonstration and assessment of additionality".

Since the CPA will generate economic benefits other than CDM related income and therefore simple cost analysis (Option I) is not applicable, benchmark analysis (Option III) is chosen to conduct the investment analysis.

The selection of 7% of benchmark for project IRR before tax for livestock industry is derived from *Economic Evaluation Code for Construction of Project ver. 03* jointly issued by National Development and Reform Commission of People's Republic of China (NDRC) and Ministry of Construction of People's Republic of China in 2006.

The project IRR post tax of a specific CPA will be calculated when inclusion of a CPA under PoA.

The parameters contribute more than 20% of project cost or revenue will be applied for sensitivity analysis:

Barrier analysis

Not applicable.

Common practice analysis

The PoA is SSC project. Not applicable.

Additionality-related eligibility criteria

✓ Eligibility criteria for inclusion of a CPA in PoA

The eligibility criteria for inclusion of a SSC-CPA in the PoA are transparently established in PoA-DD and in accordance with *for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities ver. 02.0 EB70*. All the eligibility criteria stipulated in the standard as well as the applicability criteria listed in the applied methodologies are covered and addressed in PoA-DD.

✓ Operation and management plan of CME

The operation and management plan of CME regarding avoiding double counting and database recording system training to the staff of CPA are appropriately described in PoA-DD.

✓ Match of CPA scenario and methodology

The CPA scenario and the methodology applied are correctly presented for CPA

inclusion.

✓ **Emission reduction determination**

The emission reduction determination of PoA are correctly justified in accordance with the applied methodologies and all the parameter and assumptions for ex-ante determination are well evidenced.

✓ **Additionality demonstration**

The additionality demonstration of CPA under PoA are appropriately determined.

5.4 Operational, Management and Monitoring Plan of the PoA

1. Operational and Management system

The operation and management plan of CME has been appropriately established in section C of the PoA-DD in order to monitor emission reduction as described in PoA-DD. It clearly indicates the responsibilities for and institutional arrangements for data collection and archiving. CME is responsible to assign the data recording system for CPA. The responsibilities of CME have been clearly addressed:

- ✓ A management system to enable the CDM to check the features of potential CPAs has been developed, implemented and established in PoA-DD.
- ✓ The record keep system for each CPA under PoA will be established by CME.
- ✓ All the staff in CPA will be appropriately trained by CME before work commencement.
- ✓ A procedure for avoid double counting of a CPA that has been already registered either as a CDM project or as a CPA of another PoA will be determined by CME.
- ✓ The provisions to ensure the CPA are aware of and have agreed that their activity is being subscribed to PoA.
- ✓ The monitoring plan cover all monitoring parameters given in the applied monitoring methodology or all parameters which have to be monitored w.r.t. the CPA/PoA boundary.
- ✓ The means of implementation of the monitoring plan, including data management quality assurance and quality control procedures are sufficient to ensure that the ERs to be achieved by the individual CPA can be properly reported and verified.

2. Monitoring plan

The DOE applied a two-step process to assess the compliance with the requirements of monitoring plan, as follows:

- a) Compliance of the monitoring plan with the approved methodology:

Checked the list of parameters required by the selected approved methodology by means of document review. The monitoring parameters involved in PoA are as follows:

- W_{site} –average animal weight of a defined livestock population at the CPA site
- nd_y –number of days in year y where the treatment plant was operational,
- $N_{da,y}$ –number of days animal is alive in the farm in year y .
- $N_{p,y}$ –number of animals produced annually of type LT in year y .
- $MS\%_{o,i,y}$ – Fraction of manure handled in system i in year y
- $BG_{burnt,y}$ - the amount of biogas utilized in year y
- Q_y –quantity of manure transported
- $Q_{y,treatment}$ –quantity of product transported
- CT_y –average truck capacity for manure transportation
- $CT_{y,treatment}$ –average truck capacity for product transportation
- DAF_w –average incremental distance for manure transportation
- $DAF_{treatment}$ –average incremental distance for product transportation
- T_{PJ} –temperature of the biogas at the flow measurement site
- P_{PJ} –pressure of biogas at the flow measurement site
- $EC_{PJ,y}$ –quantity of electricity consumed by a typical SSC-CPA in year y
- $FV_{RG,h}$ –volumetric flow rate of the biogas discharge to flare in hour h
- $MS\%_l$ –fraction of volatile solids (%) handled by storage device l .
- T_i –annual average ambient temperature at meteorological station nearby the project site
- AI_l –annual average interval between manure collection and delivery for treatment at a given storage device l .
- On site inspections
- Soil application

It is confirmed that the monitoring plan contains all necessary parameters, that they are clearly described and that the means of monitoring described in the monitoring plan complies with the requirements of the applied methodologies;

b) Implementation of the monitoring plan:

The monitoring arrangements described in the monitoring plan are feasible within the project design;

The means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the CPA within PoA can be reported ex post and verified.

The assessment has been conducted by the DOE by means of reviewing of the documented procedures, interviewing with relevant personnel, project plans and physical inspections of the specific CPA site.

5.5 Crediting Period

✓ Start date of PoA

According to Glossary of terms EB 70 Annex 7 version 7 the starting date of a PoA is defined as the date on which the coordinating/managing entity officially notifies the secretariat and the DNA of their intention to seek the CDM status or the date of publication of the PoA-DD for global stakeholder consultation. For this PoA this would be 2011-09-02. However due to problems at uploading via the UNFCCC interface providing an Error message that the date has to be 4 weeks in the future for SSC PoAs, PP has changed the starting date of the PoA to 2013-02-01.

✓ Duration period of PoA

According to the paragraph 6(h) in *Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities* (version 04.1, EB 55 Annex 38): length of the crediting period for PoA not exceeding 28 years (60 years for A/R). The duration time indicated in PoA-DD of 28 is in line with the procedure. , This has been involved in EC 22 for inclusion of a CPA.

It is confirmed by TÜV NORD that the start date of PoA was unambiguously given in entire PDD and in line with Glossary of CDM Terms Ver. 07. And the end of crediting period for CPA was correctly defined therein in accordance with *Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities* (version 04.1, EB 55 Annex 38)

5.6 Environmental Impacts

Environmental Impact Assessment is stipulated by the host party according to Law of the People's Republic of China on Appraising of Environment Impacts, adopted at the 30th meeting of the Standing Committee of the Ninth National People's Congress on 2002-10-28.

The purpose of the PoA is to install animal manure treatment system with recovery of biogas for energy generation in Hubei province. The main environmental impacts have been analyzed in PoA-DD. When including a CPA under the PoA, a CPA-specific environmental impacts will be summarized based on the approved CPA-specific EIA. Thus the environmental impact assessment of the 1st CPA has been checked by the validation team through on-site validation. Neither significant environmental impacts nor transboundary impacts have been observed.

5.7 Comments by Local Stakeholders

The PP followed the invitation procedure for stakeholder comments on the PoA level in line with relevant requirements. A local stakeholder consultation was conducted in July and August 2011 and relevant stakeholders were invited for comments through 85 questionnaires distribution. Given the comments received in the consultation process, the project owner of each CPA will conduct effective protection measures parallel with the implementation of each CPA to cover the requirements of environmental protection and mitigate the environmental impact.

Based on the on-site validation investigation, all relevant local stakeholders have been invited to comment on the PoA and the first CPA, and a summary of comments is available in the POA-DD in section D.2. And given the positive comments received, no significant comment was necessary to be taken into account

5.8 Participation

5.8.1 Definition of Roles

Project Participants and CME

The following PPs are involved in the PoA, which are consistent with Annex I of PoA-DD and LOA from involved parties:

- Wuhan Tianying Environmental Engineering Co., Ltd.

Authorized as CME by NDRC of China to voluntarily participant in and carried out the project activity.

- A&T Carbon Asset Co., Limited

The UK DNA has agreed the above entity to purchase and sale CERs generated by each CPA within PoA entitled “Animal Manure Treatment Programme in Hubei Province”.

Project participants are listed in tabular form in section A.3 of the PoA-DD and this information is consistent with the contact details provided in Annex I of the PoA-DD.

No entities other than those approved as project participants are included in these sections of the PDD.

5.8.2 LOA

- Approval from Host Party^{HCA/}

The host party, P.R. China, ratified the KP to the UNFCCC on 2002-08-30. The LOA was issued by the National Development and Reform Commission of P.R. China (NDRC, China’s DNA) on 2012-04-18 (English version no. 3968). The NDRC agreed that Wuhan Tianying Environmental Engineering Co., Ltd. (the CME) transfers no more than 3,000 tCO₂e in total Certified Emission Reductions (CERs), which will be

generated from the 1st CPA, to A&T Carbon Asset Co., Limited which was authorized by UK DNA.

The HCA furthermore states that the PoA would assist China in achieving sustainable development and it confirms that the project complies with the requirements of the host country. This document has been provided by the project participants. The PoA title, Animal Manure Treatment Programme in Hubei Province, listed in the HCA is exactly the same as the PoA title in the final PoA-DD.

The authenticity of this HCA has been proved by means of checking the Chinese DNA website.

➤ LOA from Annex I Party-UK ^{/LOA/}

The LOA from UK's DNA, Environment Agency was issued on 2012-06-27. UK has ratified the KP to the UNFCCC on 2002-05-31.

It authorizes A&T Carbon Asset Co., Limited as a project proponent in the PoA "Animal Manure Treatment Programme in Hubei Province" in China, developed under Article 12 of the Kyoto Protocol on UNFCCC.

5.8.3 MoC

The MOC was provided as a scanned version by A&T Carbon Asset Co., Limited who has the contractual relationship with TÜV NORD. After reviewing, it is confirmed that:

- The latest version of the form "Modalities and Communication statement" (F-CDM-MOC) has been used.
- The information required as per the F-CDM-MOC, including its Annex 1, is correctly completed.
- The MoC confirms that the CME, Wuhan Tianying Environmental Engineering Co., Ltd. and PP from UK can communicate with the Board.
- The CME, Wuhan Tianying Environmental Engineering Co., Ltd. and PP from Annex I country-UK are nominated as joint focal signing M-MOC correspond to the PP's authorized signatories included in F-CDM-MOC, Annex 1.
- The representative submitted the MoC statement to DOE and the one signed the written confirmation are duly authorized to do so on behalf of the respective project participant.

The corporate identity of all project participants and focal points is included in the Modalities of Communication (MoC) statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories.

TÜV NORD confirmed that the MoC statement complies with all relevant forms and that it is in line with the requirements stipulated in paragraph 72 of *Clean Development Mechanism Project Standard* (ver. 02.0 Annex 2 EB 70) and paragraph 59 to 61 of VVS ver. 03.0 Annex 3 EB 70.

5.9 Project Documentation Editorial Aspects

The latest SSC-PoA-DD form (ver. 02.0, EB67/Annex 30) and SSC-CPA-DD form (Ver. 02.0, EB66/Annex 17) and the latest version of *Guidelines for completing the component project design document form for small-scale component project activities* (ver. 01.0, EB66/Annex 17) and *Guidelines for completing the programme design document form for small-scale CDM programmes of activities* (ver. 02.0, EB67/Annex 30) are applied when completing the DDs.

6 VALIDATION OPINION

Wuhan Tianying Environmental Engineering Co., Ltd. has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: “Animal Manure Treatment Programme in Hubei Province” with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board

In the course of the pre-validation 5 Corrective Action Requests (CARs) and 2 Clarification Requests (CLs) were raised and successfully closed.

The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The PoA is in line with all relevant host country criteria (P.R. China) and all relevant UNFCCC requirements for CDM. Project activity approvals have been obtained from DNA of P.R. China vide the Letter of Approval (HCA) dated 2012-04-18 (No. 3968) and from DNA of United Kingdom dated 2012-06-27.
- The PoA additionality is sufficiently justified in the PoA-DD.
- The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient.
- The monitoring plan is transparent and adequate.
- The calculation of the PoA emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 25,641 t CO₂e are most likely to be achieved within the (1st renewable) crediting period.
- All information has been consistently applied in the generic component of the POA-DD.

The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.

Shanghai, 2012- 12-23



Huang Jie
TÜV NORD JI/CDM CP
Validation Team Leader

Essen, 2012- 12-23



Jochen Schubert
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/BBP/	<ol style="list-style-type: none"> 1. Budget of first batch Biogas Project, issued by Hubei Development and Reform Commission and Hubei Agriculture Department on 2011-09-08. 2. Work Plan for Biogas project, including investment for each CPA.
/ERPA/	Emission Reduction Purchase Agreement, signed by Wuhan Tianying Environmental Engineering Co., Ltd. and A&T Carbon Asset Co., Limited dated 2011-10-22.
/CME-BL/	CME Business license: Business license for CME, Wuhan Tianying Environmental Engineering Co., Ltd. Wuhan Administration for Industry & Commerce, registration no. 420100000144807.
/CPA-AEIA/	Approval of Environment Impact Assessment for the real case CPA, Hubei Chuyue Farming, issued by Dawu County Environment Protection Bureau on 2011-11-19. ref no. Wu Huan Han[2011]79.
/CPA-AFSR/	Approval of Feasibility Study Report for Chuyue Livestock farm, issued by Hubei Development and Reform Commission on 2011-04-29, ref no. E Fa Gai Nong Jing[2011]509.
/CPA-BSA/	Sample copy of Biogas Supply Agreement, signed by Hubei Chuyue Breeding Farm and Villagers Committee of Dachong village, Fangfan Town, Dawu County, Hubei Province dated 2011-04-01.
/CPA-DD/	<p>Specific CPA-DD, titled 'Animal Manure Treatment Programme in Hubei Province--CPA-0001'</p> <ol style="list-style-type: none"> 1. 1st GSP ver. 01, dated 2011-08-17. 2. 2nd GSP ver. 04, 2012-11-21. 3. Ver. 05, dated 2012-12-23
/CPA-EIA/	<ol style="list-style-type: none"> 1. Environment Impact Assessment for the first specific-CPA Chuyue Livestock farm compiled by Xiaogan City Environmental Protection Science Institute, Nov. 2011. 2. The entity has the qualification certificate Class-B on environmental impact assessment issued by Ministry of Environmental Protection of People's Republic of China dated 2010-12-30. certificate no. Guo Huan Ping Yi 2623.
/CPA-FSR/	<ol style="list-style-type: none"> 1. Feasibility Study Report for the specific CPA, Hubei Chuyue Breeding Farm, compiled by Wuhan Tianying Environmental Engineering Co., Ltd.

Reference	Document
	<p>in March 2011.</p> <p>2. The entity has the qualification certificate Class-B on Engineering Design issued by Department of Housing and Urban-Rural Development of Hubei Province on 2010-06-22. certificate no. A242008984.</p>
/CPA-LAY/	Layout of the specific CPA, Hubei Chuyue Breeding Farm.
/GCC/	General construction contract, signed between Hubei Chuyue Farming Co., Ltd. and Wuhan Tianying Environmental Engineering Co., Ltd. dated 2011-12-28.
/HCA/	Letter of approvals from the host party P. R. China issued by National Development and Reform Commission dated 2012-04-18, English version no. 3968.
/LOA/	Letter of approval issued by UK's NDA, Environmental Agency dated 2012-06-27.
/MOC/	Modalities of Communication
/PoA-DD/	<p>PoA- Design Documents: "Animal Manure Treatment Programme in Hubei Province"</p> <ol style="list-style-type: none"> 1. 1st GSP, version 01, dated 2011-08-17. 2. 2nd GSP, version 04, 2012-11-21. 3. Ver.05, dated 2012-12-23
/SHCP/	<ol style="list-style-type: none"> 1. Notice of Stakeholder Consultation Survey for biogas utilization PoA, issued by Hubei Rural Energy Office dated 2011-07-13, ref no. E Neng Neng Ban[2011]31. 2. Stakeholder Consultation Survey, held by Hubei Agricultural Energy Office held 2011-07-25 to 2011-08-05. 3. Sample copy of questionnaires.
/VC/	Validation contract, signed between TÜV NORD CERT GmbH JI/CDM Certification and Wuhan Tianying Environmental Engineering Co., Ltd..
/XLS/	Emission reduction calculation spreadsheet ($EF_{grid,CM,y}$)

Table 7-2: Background investigation and assessment documents

Reference	Document
/AMS-III.D/	AMS-III.D ver.18.0: Methane recovery in animal Manure management systems

Reference	Document
/AMS-III.AO/	Methane recovery through controlled anaerobic digestion ver. 01
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/EAD/	Evidence for additionality demonstration: <ol style="list-style-type: none"> 1. Guidelines for demonstrating additionality of microscale project activities, Ver. 04, EB 68 Annex 26. 2. Guidelines on the Demonstration of Additionality of Small-scale project activities, ver. 09, EB68 Annex 27.
/GCP/	UNFCCC: Guidelines for completing the Project Design Document Form , (v. 01.0)
/IPCC/	<ul style="list-style-type: none"> • IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000 • Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
/KP/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/PCP/	Clean development mechanism project cycle procedure (ver. 03.1, EB 70 Annex 4)
/POAR/	<p>PoA related rules:</p> <ol style="list-style-type: none"> 1. “Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities” (current version 04.1, EB 55 Annex 38) (the “PoA Procedures”); 2. <i>Clarifications regarding the “procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities”</i> (Ver. 01, EB 60 Annex 26). 3. “Procedures for review of erroneous inclusion of a CPA” (current version 02, EB 55 Annex 37) (the “CPA Review Procedures”) 4. Guidance for determining the occurrence of de-bundling under a programme of activities (PoA) (v03, EB54 Annex 13) 5. Guidelines for demonstrating additionality of microscale project activities (version 04, EB 68 Annex 26) 6. Implementation plan for standards for programme of activities (version 01.0, EB 64 Annex 2) 7. Standard for sampling and surveys for CDM project activities and programme of activities (version 03.0, EB 69 Annex 4) 8. Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 02.0, EB70 Annex 5)

Reference	Document
/POA-T/	CDM-SSC-PoA-DD - Small-Scale CDM Programme of Activities Design Document form (version 02.0, EB 67 Annex 30) CDM-SSC-CPA-DD -Small-Scale CDM Component Programme Activity Design Document form (version 01, EB 66 Annex 17)
/PS/	Clean Development Mechanism Project Standard ver. 02.0, EB70 Annex 2
/Tool/	1. Tool to determine project emissions from flaring gases containing methane ver.01. 2. Tool to calculate the emission reduction for an electricity system ver. 02.2.1. 3. Tool for the demonstration and assessment of additionality (ver. 06)
/VVS/	Validation and Verification Standard (Version 03.0, EB 70, Annex 3)

Table 7-3: Websites used

Reference	Link	Organisation
/dna/	http://cdm.ccchina.gov.cn/english/index.asp	National Development and Reform Commission (DNA of China)
/cd4cdm/	www.cd4cdm.org	UNEP Riso Centre
/iges/	http://www.iges.or.jp/en/cdm/report_cdm.html	Institute for Global Environmental Strategies
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Wei Miao	Hubei Chuyue Farming Co., Ltd./ General Manager
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zhang Han	Wuhan Tianying Environmental Engineering Co., Ltd./ General Manager
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Yu Changyin	Wuhan Tianying Environmental Engineering Co., Ltd./ Manager

Reference	Mol ¹		Name	Organisation / Function
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Du Chijun	Wuhan Tianying Environmental Engineering Co., Ltd./ Officer
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Tang Jianhua	Hubei Provincial Rural Energy Office/ Director
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Chen Jie	Hubei Provincial Rural Energy Office/ Director
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Xiao Guangwu	Hubei Development and Reform Commission / Director
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Fan Dan	Hubei Agriculture Environmental Protection Bureau / Director
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Xiao Jing	Xiaogan City Environmental Protection Bureau / Director
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Li Xu	Xiaogan City Environmental Protection Bureau / Director
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Wei Guangtai	Xinsheng village, Fangfan town, Dawu County, Hubei Province/ Villager
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zhang Jiangfeng	Xinsheng village, Fangfan town, Dawu County, Hubei Province/ Villager
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zhao Congxue	Zhongchong village, Fangfan town, Dawu County, Hubei Province/ Villager
/IM04/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Bai Juchuan	A&T Carbon Asset Co., Limited/ Project Manager
/IM04/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Feng Wenqiang	A&T Carbon Asset Co., Limited / Project Manager
/IM04/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Yu Xiaoxiao	A&T Carbon Asset Co., Limited/ Project Manager
/IM04/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Jiangang Jia	Baoding Tianwei Group Co., Ltd.

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Applicability Criteria
- A3:** Assessment of Baseline Identification
- A4:** Assessment of Financial Parameters
- A5:** Assessment of Barrier analysis
- A6:** Outcome of the GSCP
- A7:** Eligibility Criteria Assessment
- A8:** Statement of competence of involved Personnel

ANNEX 1: VALIDATION PROTOCOL

Table A-1: Programme Requirements Checklist

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
A. General Description of the Programme of Activities				
A.1. Technology to be employed <i>Validation of programme technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.</i>				
<p>A.1.1. Does the PoA-DD contain a clear, accurate and complete PoA description?</p> <p>(VVS, v. 3.0, §§ 64, 69) <i>The PoA-DD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the programme activity and the technical aspects of its implementation.</i></p> <p><i>Pl. consider esp. chapters A.2, A.6 (in case of LSC) for assessment.</i></p> <p><i>§69 (a) Describe the process undertaken to validate the</i></p>	/PoA-DD/ /IM01/ /IM02/ /IM03/	<p><i>Description:</i> The project description is given in the POA-DD.</p> <p><i>Validator's action:</i> The technology employed and treatment process were checked through on-site investigation, documents review and project owner, CME interviews.</p> <p><i>Conclusion:</i> The POA-DD has contained a clear description of the project activity. Nevertheless, CAR PoA A1 regarding the utilization of energy</p>	CAR PoA A1 CL PoA A2 CL PoA A3	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>accuracy and completeness of the programme description.</i> <i>§69 (b) Contain the DOE's opinion on the accuracy and completeness of the programme description.</i>		recovered from biogas, CL PoA A2 regarding the history of the PoA and CL PoA A3 regarding the contractual situation were raised.		
A.1.2. Does the PoA-DD contain a clear, accurate and complete definition (including measures/ technology(ies) to be employed) of a CPA under the PoA? (VVS, v. 3.0, § 189)	/CPA-DD/ /PoA-DD/ /AMS-III.D/	<i>Description:</i> The technology and measure to be used to reduce emissions is produce biogas through livestock manure through the installed anaerobic digester for biogas recovery and combustion, which includes manure treatment system, biogas recovery system and biogas utilization system.. <i>Validator's action:</i> By means of crosschecking PoA-DD, related small scale methodology and onsite validation. <i>Conclusion:</i> The description of a typical CPA in the PoA-DD covers the technology and measure to be used.	OK	OK
A.1.3. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the PoA and the CPAs will be implemented acc to the descriptions in the PoA-DD and the CPA-DD?	/CPA-DD/ /PoA-DD/ /AMS-III.D/ /GCC/	<i>Description:</i> The PoA is located in Hubei province, P.R. China, which is coordinated and managed by Wuhan Tianying Environmental Engineering Co., Ltd. (CME). The manure from livestock farm(s), which would be left to decay anaerobically without methane recovery and destruction in baseline scenario, will be firstly collected and fed into an adjustment pool, once the designed fermentation proportion fulfils the designated specification, the manure will be then fed into an anaerobic digester, the organic matter will be converted into biogas under designed anaerobic conditions. The biogas will be utilized as fuel for energy	GAR CPA A1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		<p>generation in Hubei province.</p> <p>The slurry from the anaerobic treatment system will be collected for land application. The technology employed is environmentally safe and sound. The duration period of the PoA is 28 years.</p> <p><i>Validator's action:</i></p> <p>The real situation has been investigated during the site visit. It is observed that the project activity has been implemented as described in sections A.2 and A.6 of the POA-DD.</p> <p>Manure treatment facilities for CPA-0001 have been checked during onsite visit. Photos were taken in Chuyue Livestock Farm. The general construction contract for CPA-0001 been cross-checked.</p> <p><i>Conclusion:</i></p> <p>The project description in the CPA-DD is in accordance with the real situation. Nevertheless, CAR CPA A1 regarding the technical description of CPA was raised.</p>		
<p>A.1.4. In case the programme involves alteration of an existing installation or process, is a clear description available regarding the differences between the programme and the pre-programme situation?</p> <p>(VVS, v. 3.0, § 68)</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p>/IM01/ /CPA- FSR/ /IM03/</p>	<p><i>Description:</i></p> <p>Not applicable since the project is a Greenfield project and does therefore not involve the alteration of the existing installation or process.</p> <p><i>Validator's action:</i></p> <p>It was confirmed through on-site investigation, document reviews and local stakeholder interviews.</p> <p><i>Conclusion:</i></p> <p>The project doesn't involve the alteration of the existing installation of process.</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
A.1.5. Has a sufficient description of the general operating and implementing framework of the PoA and its CPAs been given? (VVS, v.3.0, §189)	/PoA-DD/ /IM01/ /IM02/ /IM03/ /IM04/	<p><i>Description:</i></p> <p>The general operating and implementing framework of the PoA has been set and sufficiently described in the PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD has been checked against the paragraph 6 of Annex 38 EB 55.</p> <p><i>Conclusion:</i></p> <p>The description of operating and implementing framework of the PoA is sufficient.</p>	OK	OK
<p>A.2. Small scale project activity</p> <p><i>It is assessed whether the project qualifies as small-scale CDM PoA</i></p>				
A.2.1. Does the programme fall within the small scale project activity threshold and applies a large-scale approved methodology? In this case, are the modalities and procedures for large-scale project activities followed? (VVS, v. 3.0, § 151)	/PoA-DD/ /CPA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>According to the applied methodology AMS-III.D, the aggregate emission reduction for a CPA from type III component is less than or equal to 60kt CO₂/yr, it can be concluded that the project falls into small-scale project activity. A small scale methodology AMS-III.D was applied in CPA within the PoA.</p> <p><i>Validator's action:</i></p> <p>By means of on-site investigation and CPA-DD checking..</p> <p><i>Conclusion:</i></p> <p>It is concluded that the each CPA under the PoA is SSC project, which has been stipulated in EC 15. Small scale methodology AMS-</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		III.D is applied.		
In case of project activities applying a LSC-Methodology, go to B.1				
<p>A.2.2. Does the programme qualify as a small scale PoA as defined in decision 4 / CMP.1 annex II?</p> <p>(VVS, v. 3.0, §§ 150–152)</p> <p><i>Please indicate whether the CPAs meet the eligibility criteria for small scale-projects. Especially consider whether the CPAs qualify within the thresholds of the three possible types of small-scale project activities</i></p>	<p>/PoA-DD/ /CPA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>According to the applied methodology AMS-III.D, the aggregate emission reduction for a CPA from type III component is less than or equal to 60kt CO₂/yr. Each CPA meets the eligibility criteria for small scale project.</p> <p><i>Validator's action:</i></p> <p>By means of on-site investigation and CPA-DD checking.</p> <p><i>Conclusion:</i></p> <p>Each CPA under the PoA is qualified as a small scale project.</p>	OK	OK
<p>A.2.3. Does the PoA make provisions for each CPA not to exceed the applicable threshold throughout the crediting period?</p> <p>(EB 70, Annex 5, §16 (k))</p>	<p>/PoA-DD/ /CPA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>According to the applied methodology AMS-III.D, the emission reduction for a CPA from type III is not exceed the threshold 60ktCO₂/yr. It has been clearly addressed as EC 15 for inclusion of CPA.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD, CPA-DD and the methodology AMD-III.D were reviewed.</p> <p><i>Conclusion:</i></p> <p>Requirements are fulfilled. It was involved as EC 15 for CPA inclusion to ensure the SSC threshold are not exceed.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>A.2.4. Are possible cross effects between CPAs (when applying multiple small scale methodologies) taken into account appropriately?</p> <p>(EB 70, Annex 5, §30)</p>	<p>/PoA-DD/ /CPA-DD/ /AMS-III.D/</p>	<p><i>Description:</i> The project applied one Small Scale methodology AMS-III.D. No multiple methodologies are applied.</p> <p><i>Validator's action:</i> By means of PoA-DD and CPA-DD reviewing.</p> <p><i>Conclusion:</i> It is not applicable to the PoA.</p>	OK	OK
<p>A.2.5. Does the programme apply one of the approved small scale categories and any methodology(ies) and tool(s) referred therein?</p> <p>(VVS, v. 3.0., § 152 (b))</p> <p><i>Check, if applicable the expiry dates of the applied methodology(ies). Further, take into consideration the general guidance to the methodologies², which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.</i></p>	<p>/PoA-DD/ /AMS-III.D/</p>	<p><i>Description:</i> The PoA-DD applied SSC methodology AMS-III.D in the webhosted PoA-DD, 'Methane recovery in animal manure management systems' ver. 18.0 approved at EB, valid from 2011-10-13 and the request for registration can be submitted until 2013-08-07. The referenced tools including "Tool to determine project emission from flaring gases containing methane" ver. 01, "Tool to calculate the emission factor for an electricity system" ver. 02.2.1 and Tool for the demonstration and assessment of additionality. Ver. 06.0 and AMS-III.AO: "Methane recovery through controlled anaerobic digestion" ver. 01.</p> <p><i>Validator's action:</i> The methodologies and the tools referred were checked through the UNFCCC website.</p> <p><i>Conclusion:</i> The project applied AMS-III.D ver. 18.0 which is assessed as appropriate.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>A.2.6. Are the small scale CPAs not debundled components of a larger project activity?</p> <p>(VVS, v. 3.0, §203 and EB 70, Annex 5, § 16 (I))</p> <p><i>Describe the steps taken to assess whether the CPA is not a debundled component of a large scale activity, in accordance to the “Guidelines on assessment of debundling for SSC project activities”.</i></p> <p><i>In case each of the independent subsystems/measures included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology (i.e. 150kW, 0.6 GWh, 0.6 ktCO₂e), then that CPA of the PoA is exempted from the de-bundling check, i.e. is considered as not being a debundled component of a large-scale activity</i></p>	/PoA-DD/	<p><i>Description:</i></p> <p>Section A.4.4.1 of the PoA-DD does include a confirmation that the SSC-CPA included in the PoA is not a de-bundled component of another CPA or CDM project activity according to EB54 Annex13: <i>Guidelines on assessment of debundling for SSC project activities.</i></p> <p><i>Validator’s action:</i></p> <p>The validation team has also visited the CDM pipeline and UNFCCC CDM website and found no project has been registered by the project owner.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that the project is not a debundle component of a larger project activity, Which was involved in EC 19 for inclusion of a CPA.</p>	OK	OK
<p>A.3. Definition of a typical Component Project Activity (CPA)</p> <p><i>The description of a typical CPA is assessed. The eligibility criteria shall be checked for appropriateness and completeness.</i></p>				
<p>A.3.1. Has the POA-DD unambiguously defined a CDM programme activity (CPA) under the PoA?</p>	/PoA-DD/ /IM01/ /IM02/	<p><i>Description:</i></p> <p>The related PoA-DD states the following CDM programme activity: “Animal Manure Treatment Programme in Hubei Province”. The first CPA-0001 will be implemented in Hubei Province.</p> <p><i>Validator’s action:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
	/IM03/	By means of PoA-DD checking and onsite interviews with government representatives. <i>Conclusion:</i> The PoA-DD unambiguously defined the CDM programme activity in section A.2.		
<p>A.3.2. Does the PoA-DD contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used?</p> <p><i>The PoA-DD shall contain a clear description of a typical CPA which provides the reader with a clear understanding of the precise nature of the project activity and the technology / measure to be used.</i></p> <p><i>Describe the process undertaken to validate the accuracy and completeness of the CPA description.</i></p>	/PoA-DD/ /CPA-FSR/	<p><i>Description:</i></p> <p>The technology and measure to be used to reduce emissions is produce biogas through livestock manure through the installed anaerobic digester for biogas recovery and combustion, which includes manure treatment system, biogas recovery system and biogas utilization system..</p> <p><i>Validator's action:</i></p> <p>By means of crosschecking PoA-DD, related small scale methodology and onsite validation.</p> <p><i>Conclusion:</i></p> <p>The description of a typical CPA in the PoA-DD covers the technology and measure to be used. Please refer to CAR PoA A1.</p>	CAR PoA A1	OK
A.3.3. Is all necessary information consistent between the finalized PoA-DD and the Generic CPA-DD?	/PoA-DD/ /CPA-DD/ /XLS/	<p><i>Description:</i></p> <p>All the sections in Part II generic component of the POA-DD is consistent with the finalized Part I PoA.</p> <p><i>Validator's action:</i></p> <p>By means of comparing the hosted version of generic component of the POA-DD published for GSCP with the finalized PoA-DD.</p> <p><i>Conclusion:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		It is concluded that the necessary information is consistent between the finalized PoA-DD and the generic component of the POA-DD contained as Part II in PoA-DD.		
A.3.4. Does the generic CDM-CPA-DD include Name/contact details of the entity/individual responsible for the operation of the CPA?	/PpA-DD/ /CPA-DD/ /IM01/ /IM02/	<p><i>Description:</i></p> <p>The responsible person and contact details of the entity responsible for operation of the CPA has been included in Annex 1 of the generic component of the POA-DD.</p> <p><i>Validator's action:</i></p> <p>By means of Part II: generic component of the POA-DD, Annex 1 checking and onsite interviews.</p> <p><i>Conclusion:</i></p> <p>No issues were raised.</p>	OK	OK
<p>A.3.5. Does the definition of eligibility criteria for inclusion of a CPA under the PoA include the following information:</p> <p>i) appropriate criteria for demonstration of additionality of the CPA, and</p> <p>ii) all type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility?</p> <p>(EB 70, Annex 5, §§ 8,9,10,11,12,13,14,15,16)</p> <p>Assess the specified eligibility criteria in the POA-DD in</p>	/PpA-DD/ /CPA-DD/ /POAR-8/	<p><i>Description:</i></p> <p><input checked="" type="checkbox"/> All eligibility criteria have been clearly described, esp. w.r.t. the following points, and detailed assessments are included in Annex 7 of this report:</p> <ol style="list-style-type: none"> (1) Geographical requirement of the CPA boundary (2) Confirmation of no double-counting (3) Technical requirement of the CPA, including procurement (4) CPA start date not before PoA webhosting date (5) Methodology applicability requirement of the CPA (6) Other methodological / tool requirement of the CPA, (7) The additionality assessment criteria for each CPA are met (8) Local stakeholder consultation prior to inclusion of the CPA (9) Environmental analysis requirement of the CPA (10) Public funding requirement of the CPA (11) CPA crediting period not exceed the PoA end date 	CAR PoA B1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p><i>order to determine whether or not these criteria are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA, these requirements shall include, inter alia,</i></p> <ul style="list-style-type: none"> <i>the means of demonstrating the additionality of the CPA and</i> <i>the applicability of the applied methodology.</i> <p><i>The eligibility criteria represents an essential element of ensuring the smooth functioning of programmatic CDM, therefore the validation team may raise CARs which ensure the ease of application of the eligibility criteria. (EB 70 annex 5 para 16 Footnote 2).</i></p> <p><i>Detailed assessment on the final criteria are included in the dedicated Annex A-6 of this report.</i></p>		<p>(12) Monitoring requirement of the CPA (13) The CPA shall be approved by the coordinating entity If applicable: (14) Target group and distribution mechanism requirement (15) Sampling requirements of the CPAs in accordance with the applicable guidelines by the EB (16) Requirements/Provisions for meeting threshold criteria on CPA level (SSC, Microscale) (17) De-bundling criterion for the CPA (18) Other eligibility criteria applicable for CPA implementation</p> <p><input type="checkbox"/> Not all eligibility criteria have been clearly described and following findings have been raised accordingly (after successful closure of all the findings, detailed assessments are to be included in Annex 7 of the final report):</p> <p>All applicability criteria defined in applied methodologies and tools should be included in eligible criteria for inclusion</p> <p><i>Validator's action:</i></p> <p>By means of methodology, related standards, technical data sheets and onsite validation.</p> <p><i>Conclusion:</i></p> <p>The extent of information is deemed to be sufficient to ensure its completeness of CPA inclusion eligibility criteria.</p> <p>However, CAR PoA B1 regarding EC 19 was raised.</p>		
A.3.6. Are the eligibility criteria defined verifiable, sufficiently objective and do allow to assess the inclusion of CPAs in the PoA?	/PoA-DD/ /IM02/	<p><i>Description:</i></p> <p>The potential documentations specified for each EC when inclusion of a CPA were clearly addressed in section B.2 of PoA-DD.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
(EB 70, Annex 5, §§ 17,18)		<p><i>Validator's action:</i></p> <p>By means of PoA-DD. EB 65 Annex 3 checking and interview with the CME.</p> <p><i>Conclusion:</i></p> <p>The defined EC are assessed as verifiable, objective for inclusion of a CPA in the PoA.</p>		
<p>A.3.7. In case of combination of technologies/measures and or methodologies: have distinct eligibility criteria been developed for each type of CPA?</p> <p>(EB 70, Annex 5, §§ 22,31)</p>	/PpA-DD/ /CPA-DD/	<p><i>Description:</i></p> <p>The PoA applies a single methodology, AMS-III.D. This is not applicable to the PoA.</p> <p><i>Validator's action:</i> The POA-DD has been checked.</p> <p><i>Conclusion:</i> The PoA applies a single methodology AMS-III.D.</p>	N/A	N/A
<p>A.3.8. In case of combination of technologies/measures and or methodologies: have provisions been made to ensure the compliance of a CPA using technologies/measures from several methodologies with all the eligibility criteria derived from the requirements of all the methodologies and are those described in the PoA-DD?</p> <p>(EB 70, Annex 5, §§ 29)</p>	/PpA-DD/ /CPA-DD/	<p><i>Description:</i></p> <p>The PoA applies a single methodology, AMS-III.D. This is not applicable to the PoA.</p> <p><i>Validator's action:</i> The POA-DD has been checked.</p> <p><i>Conclusion:</i> The PoA applies a single methodology AMS-III.D.</p>	N/A	N/A
B. Project Baseline, Additionality and				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
Monitoring Plan				
B.1. Reference of the Methodology				
B.1.1. Do the PoA-DD and the generic CPA-DD correctly quote an applicable version of the methodology? (VVS, v. 3.0, § 74)	/unfccc / /PoA-DD/	<input checked="" type="checkbox"/> The applied methodology is correctly quoted and is identical to the version available on the UNFCCC website. <input checked="" type="checkbox"/> The applied version of the baseline and monitoring methodology is applicable and valid at the time of submission for stakeholder consultation. The project activity applies the approved SSC methodology AMS-III.D. ver. 18.0.	OK	OK
B.2. Applicability of the Methodology				
B.2.1. Does the programme apply (an) PoA-approved and applicable CDM methodology(ies) and (a) valid version(s) thereof? (VVS, v. 3.0, §§ 70, 74, 76, 77) <i>Describe the steps taken to validate this issue.</i> <i>Describe for each applicability criterion listed in the selected approved methodology the steps taken to assess its fulfilment</i>	/unfccc / /PoA-DD/	<input checked="" type="checkbox"/> The applied methodology is correctly quoted and is identical to the version available on the UNFCCC Website. <input checked="" type="checkbox"/> The applied version of the baseline and monitoring methodology is valid at the time of submission for stakeholder consultation. <input checked="" type="checkbox"/> All applicability criteria in the methodology, the applied tools or any other methodology component referred to therein are fulfilled (please make detailed assessment in Annex 2 of this protocol).	OK	OK
B.2.2. In case of multiple methodologies: do the PoA-	/PoA-	Description:	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
DD and the generic CPA-DD list all combinations of technologies/measures and/or approved methodologies that will be implemented in the PoA and define separate eligibility criteria for each of them? (EB70, Annex 5, §28)	DD/	The PoA applies a single methodology, AMS-III.D. This is not applicable to the PoA. <i>Validator's action:</i> The POA-DD has been checked. <i>Conclusion:</i> The PoA applies a single methodology AMS-III.D.		
B.2.3. In case of multiple methodologies: is the combination of technologies/measures and/or methodologies approved? (EB 70, Annex 5, §§31,32,34,35)	/PoA-DD/	<i>Description:</i> The PoA applies a single methodology, AMS-III.D. This is not applicable to the PoA. <i>Validator's action:</i> The POA-DD has been checked. <i>Conclusion:</i> The PoA applies a single methodology AMS-III.D.	N/A	N/A
B.2.4. In case one or more applicability criteria of the methodology(ies) have not been met, has the validation team requested clarification to, revision of or deviation from the methodology(ies) in accordance with the latest guidelines? (VVS, v. 3.0, §§ 78-81)	/PoA-DD/	<i>Description:</i> The PoA applies a single methodology, AMS-III.D. This is not applicable to the PoA. <i>Validator's action:</i> The POA-DD has been checked. <i>Conclusion:</i> The PoA applies a single methodology AMS-III.D.	N/A	N/A
B.3. PoA and CPA Boundaries <i>Project Boundaries are the limits and borders defining the GHG emission reduction programme</i>				
B.3.1. Are the PoA's spatial boundaries	/CPA-	<i>Description:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
(geographical) within which all CPAs included in the PoA will be implemented clearly defined? (VVS, v. 3.0, §§ 72 (a), 82, 191) <i>Provide information on how the validation of the geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i>	DD/ /AMS-III.D/ /unfccc /	In the CPA-DD, the project boundary was defined as the physical, geographical site of livestock, animal manure management system, facilities for biogas recovery and utilization for energy generation. <i>Validator's action:</i> By means of CPA-DD and methodology AMS-III.D checking. <i>Conclusion:</i> A typical CPA's spatial boundaries (geographical/physical) has been clearly defined.		
B.3.2. Are all sources and GHGs included in the PoA/CPA boundary as required in the applied methodology? (VVS, v. 3.0, §§ 82, 84) <i>Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i>	/CPA-DD/ /AMS-III.D/ /unfccc /	<i>Description:</i> Emission sources and gases are included in the project boundary are listed in a table. <i>Validator's action:</i> The emission sources and gases were included in the table and diagram according to methodology and assessed as credible through document review and on-site investigation. <i>Conclusion:</i> All sources and GHGs are included in the project boundary as required in the applied methodology.	OK	OK
B.3.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified? (VVS, v. 3.0, §§ 84, 87) <i>Confirm if the adequacy provided by the PPs is reasonable,</i>	/POA-DD/ /AMS-III.D/	<i>Description:</i> All sources and GHGs are included in the project boundary as required in the applied methodology. <i>Validator's action:</i> The applied methodology has been checked. .	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>based on assessment of supporting documented evidence provided by the PPs or by onsite observations.</i>		<p><i>Conclusion:</i></p> <p>The methodology does not allow to choose whether a source and/or gas is to be included.</p>		
<p>B.3.4. Are provisions in place in case the implementation of a CPA might lead to emissions contributing more than 1% of the overall expected average annual emissions reductions within the project boundary and which are not addressed by the selected approved methodology?</p> <p>(VVS, v. 3.0, § 87)</p> <p><i>Describe the steps taken to validate this issue. If any emission sources that are expected to contribute more than 1% have been identified, the DOE shall request clarification of, revision to, or deviation from the methodology, as appropriate.</i></p>	<p>/AMS-III.D/ /unfccc/ /dna/</p>	<p><i>Description:</i></p> <p>Additional GHG emissions within the project activity, which are expected to contribute more than 1% of the overall expected average annual emission reductions and which are not addressed by the methodology are not considered.</p> <p><i>Validator's action:</i></p> <p>By means of desk review, onsite visit and crosschecking the applied methodology AMS-III.D.</p> <p><i>Conclusion:</i></p> <p>No additional GHG emissions which are not addressed by the methodology occur.</p>	OK	OK
<p>B.4. Baseline Identification</p> <p><i>The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.</i></p>				
B.4.1. Has the baseline scenario been determined	/AMS-	<input checked="" type="checkbox"/> The baseline is defined by the applied methodology and the PoA-DD refers to it.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>according to the methodology?</p> <p>(VVS, v. 3.0, §§ 72 (b), 89, 87(e))</p> <p><i>Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with the applied methodology and applied methodological tools. Please refer to table A-2.</i></p>	III.D/ /PoA-DD/	<p>If the answer is Yes, continue to B.4.5</p> <p><input type="checkbox"/> The baseline is not directly defined by the applied methodology.</p> <p>For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2.</p> <p><input type="checkbox"/> The determination has been carried out as per the procedure contained in the applied methodology.</p> <p><input type="checkbox"/> The following CARs / CLs have been identified with respect to the selection of the baseline scenario:</p>		
<p>B.4.2. Is the list of alternatives complete?</p> <p>(VVS, v. 3.0, § 90)</p> <p><i>Describe how it was validated that all alternatives are plausible and that any scenarios that are supplementary to those required by the methodology are realistic and credible in the context of the project activity and that no alternative scenarios have been excluded.</i></p> <p><i>Fill in all alternatives in table A-2.</i></p>		<p><input type="checkbox"/> All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other alternatives which supply comparable outputs and / or services are to be taken into consideration. Thus no plausible scenario has been excluded.</p> <p><input type="checkbox"/> The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been issued</p> <p>The baseline was defined in AMS-III.D ver. 18.0.</p>	N/A	N/A
<p>B.4.3. Is the identified baseline scenario reasonable considering all possible types of CPAs and has the baseline scenario been determined using conservative assumptions where possible, including relevant references and sources?</p> <p>(VVS, v. 3.0, § 91)</p> <p><i>Describe whether the choice of the identified baseline scenario is reasonable by validating the key assumptions.</i></p>		<p><input type="checkbox"/> The baseline scenario is reasonable and has been determined using conservative assumptions where possible. Please refer to comments in table A-2..</p> <p><input checked="" type="checkbox"/> The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative</p> <p>The baseline was defined in AMS-III.D ver. 18.0.</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>calculations and rationales used in the PoA-DD. Describe whether these are listed, relevant and <u>conservatively interpreted</u> in the PoA-DD.</i>				
<p>B.4.4. Does the baseline scenario sufficiently take into account all relevant national and/or sectoral policies within the chosen project boundary such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.?</p> <p>(VVS, v. 3.0, §§ 93, 192) <i>Describe whether the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PoA-DD. Two (2) types of national and/or sectoral policies have to be taken into account:</i></p> <p>(a) <i>National and/or sectoral policies or regulations that give comparative advantages to more emissions-intensive technologies or fuels over less emissions-intensive technologies or fuels, known as E+ policies. For this type of national and/or sectoral policies or regulations, only those that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997) shall be taken into account</i></p> <p>(b) <i>National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programmes), known</i></p>		<p>The baseline was defined in AMS-III.D ver. 18.0.</p>	<p>N/A</p>	<p>N/A</p>

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>as E- policies. For this type of national and/or sectoral policies or regulations, those that have been implemented since the adoption by the COP of the CDM M&P (decision 17/CP.7, 11 November 2001) need not be taken into account in identifying a baseline scenario.</i>				
B.4.5. What has been identified as the baseline scenario? Does the PoA-DD contain a <i>verifiable</i> description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM programme activity? (VVS, v. 3.0, § 88)	/PoA-DD/ /AMS-I.C/ /AMS-III.D/	<p><i>Description:</i></p> <p>As per AMS-III.D, for animal manure management the baseline scenario is animal manure left to decay anaerobically within the project boundary and methane is emitted to the atmosphere.</p> <p><i>Validator's action:</i></p> <p>By means of methodology, PDDs check and onsite investigation of the validation team.</p> <p><i>Conclusion:</i></p> <p>The baseline scenario was clearly defined in accordance with the methodologies AMS-III.D.</p>	OK	OK
B.5. Additionality Determination <i>The assessment of additionality will be validated with focus on whether the programme / CPA itself is not a likely baseline scenario.</i>				
B.5.1. Methodology				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>B.5.1.1. Does the PoA-DD describe how the programme is additional (i.e. that none of the implemented CPAs would occur in absence of the CDM) and does the additionality justification follow the requirements of the applied methodology and/or methodological tools?</p> <p>(VVS, v. 3.0, §§ 72 (d), 101-102 and EB70, Annex 5, §9)</p> <p><i>Describe how it is validated that the additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools. Further focus your assessment on the reliability and credibility of data, rationales and assumptions, justifications and documentations provided by the PP.</i></p>	<p>/PoA-DD/ /AMS-I.C/ /AMS-III.D/ /POAR / /Tool/</p>	<p><i>Description:</i></p> <p>By taking the “Guideline for demonstrating additionality of micro-scale project activities” and “Guidelines on the demonstration of additionality of small-scale project activities”, into account, three approaches were adopted for additionality assessment.</p> <ol style="list-style-type: none"> 1. The CPA under the PoA is deemed additional if it can satisfy the microscale applicability criteria. As per “Guidelines for demonstrating additionality of microscale project activities” (Version 4.0) 2. The CPA under the PoA is deemed additional if it can satisfy the positive list of technologies and project activity types. As per “Guidelines on the demonstration of additionality of small-scale project activities” (Version 9.0). 3. The CPA under the PoA is deemed additional if it the IRR (after tax) of each unit is lower than the benchmark of 7%. As per investment barrier in the “Guidelines on the demonstration of additionality of small-scale project activities”. <p><i>Validator’s action:</i></p> <p>The methodology and the relevant guidelines were checked.</p> <p><i>Conclusion:</i></p> <p>The procedure for additionality demonstration was clearly identified in PoA-DD.</p>	OK	OK
<p>B.5.2. Assessment and Demonstration of Additionality of the PoA as a whole</p>				
<p>B.5.2.1. Has it been demonstrated that:</p>	/PoA-	<p><i>Description:</i> The stated goal of the related CDM programme activity</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> in the absence of the CDM the proposed voluntary coordinated action would not be implemented, or in the absence of the CDM the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. 	DD/ /IM01/ /IM02/ /IM03/	<p>is defined in the PoA-DD and tries to demonstrate the following situation in the absence of the programme activity:</p> <p><input checked="" type="checkbox"/> The proposed voluntary measure would not be implemented.</p> <p><input checked="" type="checkbox"/> The mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region.</p> <p><input checked="" type="checkbox"/> The PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.</p> <p><i>Validator's action:</i></p> <p>By means of crosschecking PoA-DD and relevant national regulations and standards.</p> <p><i>Conclusion:</i></p> <p>All the issues lined out in the left table were sufficiently demonstrated.</p>		
<p>B.5.3. Assessment and Demonstration of CPA Additionality Identification of alternatives Step 1</p> <p>(in case of SSC projects pl. skip steps 1 and 2 if appropriate; in cases where the baseline scenario is prescribed in the approved methodology, skip step 1, (VVS, v. 3.0, § 115))</p>				
B.5.3.1. Does the list of alternatives contain the status-quo situation, the programme not undertaken as a CDM project as well as all other viable alternatives for supplying the outputs or services that are to be supplied by the proposed CDM programme activity?		<i>The PoA is SSC project, it is not applicable to the PoA.</i>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>Do all identified alternatives comply with enforced legislations?</p> <p>(VVS, v. 3.0, §§ 114, 116)</p> <p><i>Describe whether the list of alternatives is credible and complete. Describe how it is validated that the list of alternatives is complete, realistic and that the alternatives are credible and that all alternatives comply with the existing and enforced legislation.</i></p> <p><i>Describe the steps taken to validate this issue on the basis of your local and sectoral knowledge.</i></p>				
<p>B.5.4. Assessment and Demonstration of CPA Additionality Investment analysis Step 2</p> <p><i>In case the investment analysis as per step 2 is chosen to justify the additionality Annex 4 "Assessment of Financial Parameters" has to be used to provide additional details of the calculation parameters..</i></p>				
<p>B.5.4.1. Does the project documentation provide evidence that the project would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?</p> <p>(VVS, v. 3.0, § 117)</p> <p><i>In cases where the project activity would produce no financial or economic benefits other than CDM-related</i></p>		<p><i>The PoA is SSC project, it is not applicable to the PoA.</i></p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>income, describe how it has been validated that at least on of the alternatives identified is less costly than the proposed project activity.</i>				
<p>B.5.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation?</p> <p>(EB 62 Annex 5 , §8) <i>Describe the steps taken to validate this issue.</i></p>		<p><input type="checkbox"/> Yes, a clear, viewable and unprotected Excel spreadsheet is available.</p> <p><input type="checkbox"/> No, a respective Excel spreadsheet needs to be made available for investment calculation.</p> <p>In this context the following additional findings have been identified: N/A</p>	N/A	N/A
<p>B.5.4.3. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?</p> <p>(EB 62 Annex 5 § 3) <i>Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a potential fair value.</i></p>		N/A	N/A	N/A
<p>B.5.4.4. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice?</p>		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
(EB 62 Annex 5, § 4) <i>State the accounting regulations applied for calculating the fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.</i>				
B.5.4.5. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation? (EB 62 Annex 5, § 4)		N/A	N/A	N/A
B.5.4.6. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)? (EB 65 Annex 21, EB 62, Annex 5, §19) <i>Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values.</i> <i>Assess whether the alternative to the CPA is to supply the same or substitute products or services. In this case, an investment comparison analysis shall be used.</i>		N/A	N/A	N/A
B.5.4.7. Were the input values used in the investment analysis valid and applicable at the time of the investment decision?		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
(EB 62 Annex 5, § 6) <i>Describe the steps taken to validate this issue</i>				
B.5.4.8. Are the input parameters based on values from Feasibility Study Reports that are approved by national authorities for proposed project activities? (VVS, v. 3.0, § 122) <i>In case the basis for input values is a Feasibility Study Report (FSR) describe how it has been ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed. Further confirm the consistency of values in FSR and POA-DD.</i>		N/A	N/A	N/A
In case a simple cost analysis has been done, go to B.4.5;				
B.5.4.9. Has been a suitable financial indicator chosen by the project participants? (VVS, v. 3.0, § 120 (a)) <i>Describe the steps taken to validate this issue.</i>		N/A	N/A	N/A
B.5.4.10. Are depreciation and other non-cash related items only considered in the tax calculation and not as cash outflow? (EB 62 Annex 5, § 5)		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.5.4.11. Is the plant load factor (PLF) chosen in a conservative manner, taking into account that the PLF may be different in the framework of demonstrating additionality and calculating the ex-ante ER? (EB 48, Annex 11)		N/A	N/A	N/A
B.5.4.12. Does the CPA-DD and related spreadsheets contain a sensitivity analysis and does the same contain variation of parameters which may vary throughout the project lifetime? (EB 62 Annex 5, § 20-21) <i>Describe relevance of parameters used in the sensitivity analysis as well as their likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.</i>		N/A	N/A	N/A
B.5.4.13. Were only variables that constitute more than 20% of either total project costs or total project revenues subjected to reasonable variation? (EB 62 Annex 5, § 20)		N/A	N/A	N/A
B.5.4.14. Have parameters, constituting less than 20% of total project costs or revenues, been identified with potential		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
material impact on the financial parameter? (EB 62 Annex 5, § 20) <i>Describe whether those parameters are considered in the sensitivity analysis?</i>				
B.5.4.15. Is the range of variation reasonable in the specific context of the project activity, taking into consideration historic trends in the business sector? (EB 62 Annex 5, § 21) <i>Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.</i>		N/A	N/A	N/A
B.5.4.16. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR? (EB 62 Annex 5, § 9)		<input type="checkbox"/> N/A <input type="checkbox"/> Yes, the costs of financing expenditures have been included. <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified: N/A	N/A	N/A
B.5.4.17. In case of equity IRR: Is the part of the investment costs, which is financed by equity, considered as net cash outflow and is the part financed by debt excluded in net cash outflow?		<input type="checkbox"/> N/A <input type="checkbox"/> Yes, in- and outflows have been considered correctly. <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified:	N/A	N/A

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(EB 62 Annex 5, § 10)		N/A		
In case a comparison analysis has been done, go to B.5.5				
<p>B.5.4.18. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)?</p> <p>(EB 62 Annex 5, §12) <i>Describe the steps taken to validate this issue.</i></p>		N/A	N/A	N/A
<p>B.5.4.19. Is a pre-tax benchmark applied in case of project IRR is calculated? In cases where a post-tax benchmark is applied, assess whether actual interest payable is taken into account in the calculation of income tax.</p> <p>(EB 62 Annex 5, § 11) <i>If this is not the case, ensure that taxation is excluded from the investment analysis. As per the guidance it is recommended to select a pre tax benchmark in order to describe the steps taken in assessing this requirement.</i></p>		<input type="checkbox"/> N/A <input type="checkbox"/> A pre-tax benchmark is applied <input type="checkbox"/> The benchmark is post-tax and the interest has been taken into account for the calculation <input type="checkbox"/> No, this requirement is not met. <p>In this context the following additional findings have been identified: N/A</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>B.5.4.20. Have both benchmark and cash flows expressed consistently, i.e. real terms (excluding the effect of inflation) or nominal terms?</p> <p><i>Describe the steps taken to validate this issue.</i></p>		N/A	N/A	N/A
<p>B.5.4.21. Is the benchmark value suitable for the project activity and is it reasonable to assume that no investment would be made at a rate of a lower return than the benchmark?</p> <p>(VVS, v. 3.0, § 121 (c))</p> <p><i>Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.</i></p>		N/A	N/A	N/A
<p>B.5.4.22. Is the benchmark applied based on parameters that are available and standard in the market?</p> <p>(VVS, v. 3.0, 121 (b), EB 62 Annex 5, §§13, 15, 16, 18)</p> <p><i>Assess whether company-specific benchmarks or benchmarks based on parameters that are available in the market are suitable to the project activity. A benchmark that includes the subjective profitability expectations or risk profile of the project developer (size risk premiums, company own risk premium, etc) is not suitable for project activities open to be developed by other entities.</i></p> <p><i>If cost of equity is applied, assure that best financial practices are used and are based on data sources which can be cross-checked against third-party or publicly available sources.</i></p>		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p><i>If cost of debt is used for the calculation of the benchmark, ensure that it is calculated as the cost of financing in the capital markets (e.g: commercial lending rates)</i></p> <p><i>If the cost/equity financing structure of the project is not yet available, 50% equity, 50% debt financing may be assumed as default.</i></p>				
Following checklist is intended for cases where internal company benchmarks are applied, otherwise go to B.5.5				
<p>B.5.4.23. Is it ensured that the project cannot be developed by other developers than the PP, so that internal company benchmarks or expected returns are suitable for the project activity?</p> <p>(EB 62 Annex 5, §§ 13 – 14)</p> <p><i>Describe how it has been validated that there is only one possible project developer.</i></p>		N/A	N/A	N/A
<p>B.5.4.24. Was the benchmark consistently used in the past by the same company for similar projects with similar risks?</p> <p>(EB 62 Annex 5, § 14)</p> <p><i>If applicable, assess the past financial behaviour of the entity during the last 3 years in relation to similar projects.</i></p>		N/A	N/A	N/A
B.5.4.25. Was the cost of debt calculated based		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>on the weighted average cost of debt financing of the legal entity owning the CDM project activity?</p> <p>(EB 62 Annex 5, § 16)</p> <p><i>If applicable, assess whether loans, bonds or debt financing from a parent company are calculated according to the latest "Guidance on Investment Analysis".</i></p> <p><i>In case that the debt structure of the project is not yet available, the cost of debt can be assumed as the commercial lending rate in the company or the yield of a 10-year bond issued by the government of the host county.</i></p>				
<p>B.5.4.26. Does the equity/debt ratio of the project reflect the long-term debt/equity finance structure of the legal entity owning the assets of the project activity?</p> <p>(EB 62 Annex 5, § 17)</p> <p><i>Assess the latest balance sheets of the legal entity owning the assets of the project activity, in case these are available and audited by a third party within two years prior to the submission of the CPA-DD for validation, and the accounting books reflect the total value of all assets needed for the project activity.</i></p> <p><i>If debt/equity financing structure is not available, 50% equity, 50% debt shall be considered as default.</i></p>		N/A	N/A	N/A
<p>B.5.5. Assessment and Demonstration of CPA Additionality Barrier analysis Step 3 or</p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
SSC additionality assessment				
<p>B.5.5.1. Are there any barriers given which have a clear and direct impact on the financial returns of the project?</p> <p>(VVS, v. 3.0, § 125)</p> <p><i>In case of LSC projects those issues <u>cannot be considered</u> as barriers and shall be assessed in the investment analysis. In case of SSC projects the same fundamentals as for LSC projects shall apply, i.e. the assessment of the investment barrier according to EB 62 Annex 5. Only unavailability of sources of finance and/or risk related barriers, for example, the risk related to technical failure that could have negative impact on financial performance are acceptable as barriers.</i></p>	<p>/PoA-DD/ /AMS-I.C/ /AMS-III.D/ /POAR/ / /Tool/</p>	<p><i>Description:</i></p> <p>By taking the "Guideline for demonstrating additionality of micro-scale project activities" and "Guidelines on the demonstration of additionality of small-scale project activities", into account, three approaches were adopted for additionality assessment.</p> <ol style="list-style-type: none"> 1. The CPA under the PoA is deemed additional if it can satisfy the microscale applicability criteria. As per "Guidelines for demonstrating additionality of microscale project activities" (Version 4.0) 2. The CPA under the PoA is deemed additional if it can satisfy the positive list of technologies and project activity types. As per "Guidelines on the demonstration of additionality of small-scale project activities" (Version 9.0). 3. The CPA under the PoA is deemed additional if the IRR (after tax) of each unit is lower than the benchmark of 7%. As per investment barrier in the "Guidelines on the demonstration of additionality of small-scale project activities". <p><i>Validator's action:</i></p> <p>The methodology and the relevant guidelines were checked.</p> <p><i>Conclusion:</i></p> <p>The procedure for additionality demonstration was clearly identified in PoA-DD.</p>	OK	OK
<p>B.5.5.2. Has the unavailability of means of finance for the project been described and adequately substantiated? Do evidences</p>	<p>/PoA-DD/</p>	<p><i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM? (EB 50 Annex 13, § 9)	/POAR /	<i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> The additionality will be demonstrated on the CPA level.		
B.5.5.3. Would provision of additional financial means lead to the mitigation of the barrier(s) demonstrated? (EB 50 Annex 13, § 7) <i>Describe why provision of additional financial means would not lead to mitigation of the barrier(s) demonstrated and hence analysing the project's additionality within the framework of an investment analysis is inappropriate. .</i>	/PoA-DD/ /POAR /	<i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> The additionality will be demonstrated on the CPA level.	OK	OK
B.5.5.4. How is it justified and evidenced that the barriers given in the PoA-DD / CPA-DD are real? (VVS, v. 3.0, § 126(a))	/PoA-DD/ /POAR /	<i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> The additionality will be demonstrated on the CPA level.	OK	OK
B.5.5.5. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity and do not prevent the implementation of at least one of the alternatives? (VVS, v. 3.0, § 126 (b))	/PoA-DD/ /POAR /	<i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> The additionality will be demonstrated on the CPA level.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.5.5.6. Does the review of relevant background information on the nature of the company(ies) and entity(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real? (EB 50 Annex 13, § 4)	/PoA-DD/ /POAR /	<i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> The additionality will be demonstrated on the CPA level.	OK	OK
B.5.5.7. Has it been demonstrated in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers? (EB 50 Annex 13, § 5)	/PoA-DD/ /POAR /	<i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> The additionality will be demonstrated on the CPA level.	OK	OK
B.5.6. Assessment and Demonstration of CPA Additionality Common practice analysis Step 4 (in case of SSC projects or first-of-its-kind LSC projects skip this step)				
B.5.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type? (VVS, v. 3.0, § 129(a)) <i>Describe why the project activity is not common practice in a</i>	/PoA-DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>transparent and unambiguous manner. If a region other than the entire host country is chosen, describe why this region is more appropriate.</i>		<i>Conclusion:</i> Not applicable as this is a SSC project.		
In case of projects activities applying ACM002, go to B.5.6.4				
B.5.6.2. To what extent similar projects have been undertaken in the relevant region? (VVS, v. 3.0, § 129(b)) <i>Similar projects are considered those that take place in a comparable environment w.r.t. regulatory framework, investment climate, access to technology and financing, etc. Registered CDM PA and PA that have been published on the UNFCCC website are not to be considered as similar.</i>	/PoA-DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> Not applicable as this is a SSC project.	OK	OK
B.5.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed? (VVS, v. 3.0, § 129(c))	/PoA-DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> Not applicable as this is a SSC project.	OK	OK
B.5.6.4. Has an output range as +/- 50% of the design output of the project activity been calculated in order to define the capacity range for "similar" projects? (EB65 Annex 21, § 47)	/PoA-DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> Not applicable as this is a SSC project.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>B.5.6.5. Does N_{all} include only plants that have started commercial operation before the start date of the project and are within the applicable output range? (EB65 Annex 21, § 47)</p> <p><i>Under N_{all}, registered CDM projects and projects undergoing validation are not to be included.</i></p>	<p>/PoA-DD/ /POAR /</p>	<p><i>Description:</i> Not applicable as this is a SSC project.</p> <p><i>Validator's action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> Not applicable as this is a SSC project.</p>	OK	OK
<p>B.5.6.6. Does N_{diff} include only plants that apply different “technology” than the project activity? (EB65 Annex 21, §§ 9, 47)</p> <p><i>The term “technology” refers to energy fuel, investment climate (access to technology, subsidies, legal regulations, etc...) or unit cost of output.</i></p> <p><i>Assess how the essential distinctions to identify the different measures have been carried out.</i></p>	<p>/PoA-DD/ /POAR /</p>	<p><i>Description:</i> Not applicable as this is a SSC project.</p> <p><i>Validator's action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> Not applicable as this is a SSC project.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.6. Algorithms and/or formulae used to determine emissions reductions <i>It is assessed whether the steps taken and the equations and parameters applied in the POA-DD/CPA-DD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).</i>				
B.6.1. Are the equations applied correctly according to the applied approved methodology? (VVS, v. 3.0, §§ 72(c), 96) <i>Describe clearly the steps taken to assess whether the methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Further take into consideration that all estimates of the baseline emissions can be replicated using the data and parameter values provided in the programme documentation</i>	/AMS-III.D/ /unfccc/ /dna/ /PoA-DD/	<input checked="" type="checkbox"/> The equations applied for calculation are correctly applied according to the approved methodology. <input type="checkbox"/> The following mistakes have been identified in this context: <i>Description:</i> Emissions reductions achieved by a specific SSC-CPA within PoA are calculated as the differences among the baseline emission (BE_y), the project emission (PE_y). $ER_y = BE_y - PE_y$ and $ER_{y,ex-post} = \min[(BE_{y,ex-post} - PE_{y,ex-post}), (MD_y - PE_{power,y,expost})]$ According to the methodology AMS-III.D, no leakage needs to be considered. The baseline and project emissions are calculated as per applied methodology. <i>Validator's action:</i> The methodology and referenced tools have been checked against the POA-DD. <i>Conclusion:</i> The applied equations are correct.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>B.6.2. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?</p> <p>(VVS, v. 3.0, §§ 97, 98)</p> <p><i>Assess the correct selection and application of methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of activity typical CPA and other evidence provided) and whether the correct equations have been used reflecting the relevant methodological choices.</i></p>	<p>/PoA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>The methodology doesn't allow any choices. The applied equations are consistent with the methodology.</p> <p><i>Validator's action:</i></p> <p>The methodology has been checked against the POA-DD.</p> <p><i>Conclusion:</i></p> <p>The choice and calculations comply with methodology and are well evidenced.</p>	OK	OK
<p>B.6.3. Have conservative assumptions been used when calculating the emission emissions?</p> <p>(VVS, v. 3.0, §§ 98, 99(a))</p> <p><i>Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the POA-DD/CPA-DD including references and sources and are conservatively interpreted in the POA-DD/CPA-DD.</i></p>	<p>/PoA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>According to AMS-III.D, conservative assumptions are considered in PE_y calculation.</p> <p><i>Validator's action:</i></p> <p>The methodology and PoA-DD were checked against the POA-DD.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that the conservative assumptions have been used in project emission calculation.</p>	OK	OK
<p>B.6.4. Are all data sources and assumptions appropriate and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission</p>	<p>/PoA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>The data and parameters which remain fixed throughout the crediting period are based on default values defined in the methodology, related tools and further reliable sources. The calculation of the grid emission factor is officially prepared by the Chinese DNA.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>reductions?</p> <p>(VVS, v. 3.0, § 98)</p> <p><i>Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the programme activity and typical CPA.</i></p>	<p>/GEF/</p> <p>/XLS/</p>	<p><i>Validator's action:</i></p> <p>The methodology, the tools have been checked against the POA-DD.</p> <p><i>Conclusion:</i></p> <p>The data and parameters which remain fixed during the crediting period are assessed to be credible and lead to a conservative result of emission reductions.</p>		
<p>B.6.5. Are all ex-ante calculation values for monitoring parameters (as defined per chapter B.7.1) reasonable?</p> <p>(VVS, v. 3.0, § 98)</p> <p><i>Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity</i></p>	<p>/PoA-DD/</p> <p>/dna/</p>	<p><input checked="" type="checkbox"/> All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative.</p> <p><input type="checkbox"/> The following mistakes have been identified in this context:</p>	OK	OK
<p>B.6.6. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change?</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p>/PoA-DD/</p> <p>/AMS-III.D/</p>	<p><i>Description:</i></p> <p>The emission reductions are real, measurable and give long-term benefits related to the mitigation of climate change.</p> <p><i>Validator's action:</i></p> <p>The emission reduction is checked with the methodology, the referenced tool and data collection and analysis included in the FSR which is done by a qualified third party.</p> <p><i>Conclusion:</i></p> <p>It's assessed to be credible.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.7. Operational, Management and Monitoring Plan of the PoA <i>It is assessed whether the operational, management and monitoring plan is appropriate for the project activity and in line with the applied methodology.</i>				
B.7.1. Operational and Management Plan				
B.7.1.1. Has the coordinating/managing entity established the operational and management arrangements for the implementation of the PoA, which includes a clear definition of roles and responsibilities of personnel involved in the CPA inclusion (i.a. their competencies) as well as records of arrangements for training and capacity development? (EB70, Annex 5, §§19(a,b),20)	/PoA-DD/ /POAR /	<i>Description:</i> An operation and management plan, the responsibility of the personnel and entities and a feasible management system are transparently established and addressed in PoA-DD. <i>Validator's action:</i> The PoA-DD and EB70 Annex 5 were checked by the validation team. <i>Conclusion:</i> The CME has established the operational and management arrangements for the implementation of the PoA.	OK	OK
B.7.1.2. Are procedures for technical review of the CPA inclusion part of the management system? (EB70, Annex 5, §§19(c),20)	/PoA-DD/ /POAR /	<i>Description:</i> The technical review of inclusion of a CPA was clearly defined in PoA-DD. <i>Validator's action:</i> The PoA-DD and EB70 Annex 5 were checked by the validation team.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i></p> <p>The procedure for technical review of the CPA inclusion is appropriately involved as part of the management system.</p>		
<p>B.7.1.3. Do the arrangements include a system/ procedure to avoid double accounting, e.g., to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA?</p> <p>(EB70, Annex 5, §§19(d),20)</p>	<p>/PoA-DD/ /POAR /</p>	<p><i>Description:</i></p> <p>The system wasn't appropriately established.</p> <p><i>Validator's action:</i></p> <p>By means of onsite investigation and interview with the owner of livestock farm and CME.</p> <p><i>Conclusion:</i></p> <p>CAR PoA C1 was raised.</p>	<p>CAR PoA C1</p>	OK
<p>B.7.1.4. Does the management system include a records and documentation control process for each CPA under the PoA?</p> <p>(EB70, Annex 5, §§19(e),20)</p>	<p>/PoA-DD/ /POAR /</p>	<p><i>Description:</i></p> <p>A record keeping system including the data collection and data base management were properly established.</p> <p><i>Validator's action:</i></p> <p>By means of onsite investigation and interview with the owner of livestock farm and CME</p> <p><i>Conclusion:</i></p> <p>The records and documentation control process for CPA was involved in the management system.</p>	OK	OK
<p>B.7.1.5. Do the arrangements include measures for continuous improvement of the PoA management system?</p>	<p>/PoA-DD/ /POAR</p>	<p><i>Description:</i></p> <p>The arrangements for Improvement of the PoA management system were involved in the management system.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
(EB70, Annex 5, §§19(g),20)	/	<p><i>Validator's action:</i></p> <p>The PoA-DD and EB70 Annex 5 were reviewed.</p> <p><i>Conclusion:</i></p> <p>It is fulfilled.</p>		
B.7.1.6. Are all other relevant elements to ensure the CME's competency to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA taken into account?	/PoA-DD/ /POAR /	<p><i>Description:</i></p> <p>The relevant EC for inclusion of a CPA including ODA, debundle, technical, greenfiled, crediting period were clearly addressed in B.2 of PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD and EB70 Annex 5 were reviewed.</p> <p><i>Conclusion:</i></p> <p>It is concluded that the relevant elements for EC of inclusion of a CPA including the debundle, technical related issue, crediting period were appropriately addressed.</p>	OK	OK
B.7.2. Monitoring Plan				
<p>B.7.2.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan?</p> <p>(VVS, v. 3.0, §§ 72 (e), 131, 132 (a) (i))</p> <p><i>Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.</i></p> <p><i>Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with</i></p>	/PoA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>Upon checking the PoA-DD, emission reduction calculation approach and the applied methodology it is confirmed that all the monitoring parameters relevant to the PoA and required by the methodology were contained in the monitoring plan.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD was checked against the methodology AMS-III.D.</p> <p><i>Conclusion:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.																																
<i>the applied methodology.</i> <i>In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.</i>		All the monitoring parameters required by the applied methodology were contained in the monitoring plan.																																		
B.7.2.2. Are the means of monitoring of all parameters contained in the monitoring plan feasible within the PoA design? (VVS, v. 3.0, §§ 132 (b) (i), 133(b)) <i>Describe the steps undertaken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design.</i>	/PoA-DD/ /AMS-III.D/	<i>Description:</i> The means of monitoring of all the parameters contained in the monitoring plan are feasible with the PoA design. <i>Validator's action:</i> All the monitoring parameters were checked against the methodology. <i>Conclusion:</i> The means of monitoring parameters contained in the monitoring plan are feasible and in accordance with the requirements of the applied methodology.	OK	OK																																
B.7.2.3. The Monitoring Parameters (VVS, v. 3.0, § 132(a)– (ii)) <i>Indicate whether the provided information for the monitoring parameter complies with the approved methodology including applicable tool(s) in the aspects listed.</i> <i>For checking the use of international standards in the nomenclature, consider:</i> a) <i>Standard format (e.g. 1,000 representing one thousand and 1.0 representing one).</i> b) <i>Values shall be directly given in SI units – or</i>	/PoA-DD/ /AMS-III.D/	<table><tr><th>Requirement</th><th>OK</th><th>Not OK</th><th>N/A</th></tr><tr><td>Label</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Data Unit</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Description</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Source of data</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Measurement equipment / measure method</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Monitoring frequency</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>QA/QC procedures</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	Requirement	OK	Not OK	N/A	Label	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Data Unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Source of data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Measurement equipment / measure method	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Monitoring frequency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	QA/QC procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	OK
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<i>additionally to original units transferred to SI.</i> c) <i>Short scale naming system: (Only) million = 10⁶ and billion 10⁹ shall be used.</i>		<table><tr><td>Purpose of data</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Standard format</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>SI units</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Short scale naming</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table> <p>As the 1st GSP of the PoA-DD, CPA-DD ver. 01 was published on unfccc website on 2011-09-02, due to the methodology change, the DD ver. 04 of the PoA was re-published for the 2nd GSP on 2012-11-23. The DD has been updated according to the validation findings and requirements by DOE. All the monitoring parameters were transparently addressed.</p>	Purpose of data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard format	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SI units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Short scale naming	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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Short scale naming	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																	
B.7.2.4. Has a monitoring plan for all types of CPA been developed in accordance with the approved monitoring methodology, and identified the monitoring provisions and data parameters a CPA has to apply/monitor? (VVS, v. 3.0, § 198)	/PoA-DD/ /CPA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>The utilization manner of biogas contains power generation, thermal energy generation for heat supply or household. However, the emission reduction from the type I won't be claimed by CME. Only the emission reduction from type III recovery methane is claimed by CME. The monitoring plan developed is applicable to the potential CPA within the PoA.</p> <p><i>Validator's action:</i></p> <p>By means of DD and methodology checking.</p> <p><i>Conclusion:</i></p> <p>A monitoring plan for all the CPA has been developed in accordance with the methodology. The monitoring parameters the CPA has to monitor were identified.</p>	OK	OK																
B.7.2.5. Have all means of implementing the	/PoA-	<p><i>Description:</i></p>	OK	OK																

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?</p> <p>(VVS, v. 3.0, § 131) <i>Check whether all necessary equations have been provided in the POA-DD/CPA-DD. Pl. consider that ex-post and ex-ante calculations might be different.</i></p> <p><i>Please consider that additional equations might be necessary to calculate auxiliary parameters.</i></p>	<p>DD/ /CPA-DD/ /AMS-III.D/</p>	<p>In sections B.6.1 and B.6.3 the equations necessary for the ex-post emission reduction calculation are described. All kind of emissions have been considered.</p> <p><i>Validator's action:</i></p> <p>The equations were checked against the methodology and related tools.</p> <p><i>Conclusion:</i></p> <p>All equations necessary for the ex-post emission reduction calculation have been described clearly.</p>		
<p>B.7.2.6. Is it likely that the monitoring arrangements described in the POA-DD/CPA-DD can properly be implemented in the context of the project activity?</p> <p>(VVS, v. 3.0, § 132(b) (i)) <i>Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.</i></p>	<p>/PoA-DD/ /CPA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>The monitoring organization, the data collection and management, is clearly described.</p> <p><i>Validator's action:</i></p> <p>The monitoring arrangement was checked through the on-site investigation against the CPA-DD.</p> <p><i>Conclusion:</i></p> <p>The monitoring arrangements are likely to be implemented properly in context of the project activity under CPA within PoA.</p>	OK	OK
<p>B.7.2.7. Are the QA/QC procedures appropriate and sufficient to ensure the emission reductions achieved from the programme activity can be reported ex-post and verified?</p>	<p>/PoA-DD/ /CPA-DD/ /AMS-</p>	<p><i>Description:</i></p> <p>The QA/QC procedures are completely appropriate and sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified.</p> <p><i>Validator's action:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
(VVS, v. 3.0, § 132(b) (ii)) <i>Please consider the description given in the relevant section of the PoA-DD and the CPA-DD. Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.</i>	III.D/	By means of on-site investigation and interviewing with the project owner. <i>Conclusion:</i> QA/QC procedures are appropriate and sufficient to ensure the emission reduction from the CPA can be verified ex-post.		
B.7.2.8. Are procedures identified for data management? (VVS, v. 3.0, § 132(b) (ii)) <i>Check whether appropriate provisions are considered for data management including responsibilities, what records to keep, storage area of records and how to process performance documentation</i> <i>Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.</i>	/PoA-DD/ /CPA-DD/ /AMS-III.D/	<i>Description:</i> A transparent monitoring method is employed in CPAs. <i>Validator's action:</i> By PoA-DD and CPA-DD review and onsite interview. <i>Conclusion:</i> All CPAs under shall be verified as long as they fulfil the eligibility criteria. In PoA-DD section B.7.2, there is provision regarding archive data for the crediting period + 2 years.	OK	OK
C. Duration and Crediting Period <i>It is assessed whether the temporary boundaries of the programme are clearly defined.</i>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
C.1.1. Is the starting date of any CPA prior to the commencement of the validation of the PoA (date of publication for GSCP)? (VVS, v. 3.0, § 193)	/GCC/ /PoA-DD/ /CPA-DD/ /unfccc/ /	<p><i>Description:</i></p> <p>The starting date of the CPA-0001 reported in CPA-DD is the general construction contract signed date on 2011-12-28, which is after the 1st GSP of the DDs on 2011-09-02.</p> <p><i>Validator's action:</i></p> <p>The General Construction Contract for Tianyue CPA and the DDs were reviewed by the validation team.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that the starting date of the CPA-0001 reported in DD will be later than the PoA GSP, as it is part of the eligibility criteria.</p>	OK	OK
C.1.2. Is the project's operational lifetime clearly defined and evidenced? <i>Check whether the project lifetime is correctly defined. Consider the latest "Guidance on the assessment of investment analysis".</i> <i>Check in case of phased implementation this has been reflected throughout the whole PoA-DD incl. the financial assessment, if applicable.</i>	/PoA-DD/	<p><i>Description:</i></p> <p>The operational lifetime will be defined at CPA level</p> <p><i>Validator's action:</i></p> <p><i>Conclusion: -</i></p>	N/A	N/A
C.1.3. Is the start of the crediting period clearly defined and reasonable? <i>Check whether the envisaged starting date of the crediting period is realistic, taking into consideration the times needed for validation and registration.</i> <i>The crediting period of the PoA should be renewed every</i>	/PoA-DD/	<p><i>Description:</i></p> <p>The start of the crediting period wasn't defined in line with the Glossary of CDM Terms ver. 07.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD was checked.</p>	CAR PoA D1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p><i>seven years (every 20 years for A/R PoA) from the start date of the lifetime of the PoA.</i></p> <p><i>Life time of the PoA starts on the date specified in the PoA-DD section B.1 or on the date of registration, whichever is later.</i></p> <p><i>In case of small-scale PoA, the start date must be stated as at least 4 weeks after the estimated submission date;</i></p> <p><i>In case of large-scale PoA, the start date must be stated as at least 8 weeks after the estimated submission date.</i></p> <p><i>(PoA registration uploading requirements step 4)</i></p>		<p><i>Conclusion:</i></p> <p>CAR PoA D1 regarding the start date of PoA was raised.</p>		
<p>C.1.4. Does the crediting period of the PoA or an individual CPA not exceed 28 years?</p> <p>(VVS, v. 3.0, § 197)</p>	<p>/PoA-DD/ /CPA-DD/ /unfccc/ /</p>	<p><i>Description:</i></p> <p>According to the paragraph 6(h) in <i>Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities</i> (version 04.1, EB 55 Annex 38): length of the crediting period for PoA not exceeding 28 years (60 years for A/R). The duration time indicated in PoA-DD of 28 is inline with the procedure.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD and EB55 Annex 38 were reviewed.</p> <p><i>Conclusion:</i></p> <p>The duration time for PoA of 28 years is clearly defined in PoA-DD.</p>	OK	OK
<p>D. Environmental Impacts</p> <p><i>Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an</i></p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>EIA should be provided to the DOE.</i>				
<p>D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA) on PoA and/or typical CPA level?</p> <p>(VVS, v. 3.0, §§ 134-135, 199)</p> <p><i>Check the host party regulations regarding EIA. If no requirements for an EIA exist, discuss whether the project participants conducted an analysis for the environmental impacts of the project activity.</i></p>	<p>/CPA-DD/ /PoA-DD/ /CPA-EIA/ /IM01/ /IM02/</p>	<p><i>Description:</i></p> <p>The EIA is stipulated by the host party according to Law of the People's Republic of China on Appraising of Environment Impacts adopted at the 30th meeting of the Standing Committee of the 9th National People's Congress on 2002-10-28.</p> <p><i>Validator's action:</i> The PoA-DD has been checked and the host party regulation has been investigated.</p> <p><i>Conclusion:</i> As per Host Party requirements an Environmental Impact Assessment (EIA) is requested on CPA level.</p>	OK	OK
<p>D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved in accordance with the host Party procedures?</p> <p>(VVS, v. 3.0, §§ 135, 199)</p> <p><i>Check the EIA and its approval, if applicable. If the EIA is conducted at CPA level, please assess if the EIA was conducted according to the description in the CPA-DD and the PoA-DD.</i></p>	/PoA-DD/	<p><i>Description:</i> It has been included in the eligibility criteria 17 that each project activities included in the CPA must have obtained approval of EIA.</p> <p><i>Validator's action:</i> The PoA-DD has been checked and the host party regulation has been investigated.</p> <p><i>Conclusion:</i> As per Host Party requirements an Environmental Impact Assessment and approval are requested on CPA level.</p>	OK	OK
<p>D.1.3. Has it been clearly indicated on which level i.e. PoA level or CPA level, an environmental analysis has been carried out or will be carried out?</p>	<p>/CPA-DD/ /PoA-DD/</p>	<p><i>Description:</i></p> <p>It is clearly indicated in PoA-DD that the EIA is conducted based on the SSC-CPA level.</p> <p><i>Validator's action:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
(VVS, v. 3.0, § 200) <i>Please check whether the indication is in line with the provided documentation.</i>	/CPA- EIA/ /IM01/ /IM02/	The PoA-DD was reviewed. <i>Conclusion:</i> The EIA is conducted on project activity level involved in each CPA within PoA.		
D.1.4. Does the PoA-DD contain a sufficiently described justification on the choice of level at which the EIA is undertaken?	/CPA- DD/ /PoA- DD/ /CPA- EIA/ /IM01/ /IM02/	<i>Description:</i> It is clearly indicated in PoA-DD that the EIA is conducted based on the SSC-CPA level. <i>Validator's action:</i> The PoA-DD was reviewed. <i>Conclusion:</i> The EIA is conducted on project activity level involved in each CPA within PoA.	OK	OK
D.1.5. Are transboundary environmental impacts considered in the analysis? (VVS, v. 3.0, § 134) <i>Check the documents and local official sources / expertise regarding transboundary environmental impacts.</i>	/PoA- DD/ /CPA- DD/ /IM02/ /IM03/ /IM04/	<i>Description:</i> No negative transboundary environmental impacts are expected, thus not included in the analysis. <i>Validator's action:</i> As EIA has not been conducted related information as per PoA-DD have been crosscheck during onsite investigation and interviews with local experts and stakeholders. <i>Conclusion:</i> No negative transboundary environmental impacts have been identified for the project.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
E. Stakeholder Comments <i>The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.</i>				
<p>E.1.1. With regard to the PoA, how have relevant local stakeholders' comments been invited to consultation prior to the publication of the POA-DD/CPA-DD?</p> <p>(VVS, v. 3.0, §§ 138-140, 201, 202)</p> <p><i>If such comments are to be sought at the CPA level this shall be described and reflected in the POA-DD and the CPA-DD.</i></p> <p><i>Check by means of document review and interviews with local stakeholders if and when a local stakeholder consultation process has been carried out.</i></p>	<p>/PoA-DD/ /IM01/ /IM03/ /IM02/ /IM04/ /SHCP / /unfccc /</p>	<p><i>Description:</i> A stakeholder meeting was conducted during July and August 2011 which is before the publication of the PoA-DD.</p> <p><i>Validator's action:</i> This has been confirmed during interview and by checking the records of stakeholder meeting.</p> <p><i>Conclusion:</i> Relevant local stakeholders have been invited to consultation prior to the publication of the PoA-DD.</p>	OK	OK
<p>E.1.2. How have the comments received been compiled and can the summary be assessed as complete and adequate?</p> <p>(VVS, v. 3.0, §§ 201, 202)</p>	<p>/PoA-DD/ /IM01/ /IM03/ /IM02/ /IM04/ /SHCP</p>	<p><i>Description:</i> The comments received from the stakeholders were considered by CME and the mitigation measures will be designed in the consequent CPAs.</p> <p><i>Validator's action:</i> By means of interview with the CME.</p> <p><i>Conclusion:</i> No negative comments were received during the stakeholder</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
	/	consultation process.		
	/unfccc			
	/			
<p>E.1.3. With regard to the PoA, can the local stakeholder consultation process be assessed as adequate?</p> <p>(VVS, v. 3.0, §§ 138-140, 201)</p> <p><i>Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation process. Give a final opinion on the adequacy.</i></p> <p><i>Please consider the following requirements in this context:</i></p> <p><i>(a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;</i></p> <p><i>(b) The summary of the comments received as provided in the PoA-DD/CPA-DD is complete;</i></p> <p><i>(c) The project participants have taken due account of any comments received and have described this process in the PoA-DD/CPA-DD.</i></p>	<p>/PoA-DD/</p> <p>/IM01/</p> <p>/IM02/</p> <p>/IM03/</p> <p>/IM04/</p>	<p><i>Description:</i></p> <p>85 questionnaires have been handed out to local people with different gender, occupation and education.</p> <p><i>Validator's action:</i></p> <p>An appropriate summary is provided in the PoA-DD.</p> <p>During interview with the local officials and the residents, they expressed their appreciation about the implementation of the project as it leads to employment opportunities and a better air quality.</p> <p><i>Conclusion:</i></p> <p>The stakeholder consultation process was assessed as adequate.</p>	OK	OK
F. Others				
F.1. Definition of Roles				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>F.1.1. Does the section A.3 of the POA-DD include an identification of the coordinating/ managing entity (a private or public entity), Host Party(ies) and PoA participants?</p> <p><i>Project participants may or may not be involved in one of the CPAs related to the PoA. The operators of individual CPAs are not required to be project participants. CDM programme participation is only recorded at the PoA level.</i></p>	/PoA-DD/ /HCA/	<p><i>Description:</i></p> <p>The CME, Wuhan Tianying Environmental Engineering Co., Ltd. was clearly indicated in A.3 of PoA-DD, which is assessed to be consistent with the authorization of Host Country Approval from NDRC. The PP from Annex I country UK was also clearly indicated in PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD and HCA were reviewed.</p> <p><i>Conclusion:</i></p> <p>The CME and PP from Annex I country UK have been clearly addressed in PoA-DD.</p>	OK	OK
<p>F.1.2. Is there any Party directly involved as project participant, and if yes, is that Party's contact details included in annex 1 of the PoA-DD and is the information provided internally consistent with section A.3 of the PoA-DD?</p>	/LOA/ /PoA-DD/ /CPA-DD/	<p><i>Description:</i></p> <p>The responsible person and contact details of the entity responsible for operation of the CPA has been included in Annex 1 of the PoA-DD.</p> <p><i>Validator's action:</i></p> <p>By means of generic component of the POA-DD, Annex 1 and onsite interviews</p> <p><i>Conclusion:</i></p> <p>No Party is directly involved as project participant.</p>	OK	OK
<p>F.2. Approval - Contribution to Sustainable Development</p> <p><i>The written approval of the parties involved is a mandatory requirement.</i></p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>F.2.1. Have written approvals of all parties involved (incl. the CME) been provided to the validation team?</p> <p>(VVS, v. 3.0, § 38)</p> <p><i>Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation.</i></p> <p><i>Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA</i></p>	<p>/HCA/ /PoA-DD/</p>	<p><i>Description:</i></p> <p>The HCA from China DNA, National Development and Reform Commission of People's Republic of China and LOA from UK were issued on 2012-04-18 and 2012-06-27 respectively. The original copy was provided by the project participants.</p> <p><i>Validator's action:</i></p> <p>The scanned copy of HCA and LOA were provided by PP. The authenticity was confirmed by means of checking the China DNA website: http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2849.pdf</p> <p><i>Conclusion:</i></p> <p>The HCA from China DNA and LOA from UK have been provided to the validation team.</p>	OK	OK
<p>F.2.2. Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM website?</p> <p>(VVS, v. 3.0, §§ 41)</p> <p><i>Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.</i></p>	<p>/unfccc / /HCA/ /LOA/</p>	<p><i>Description:</i></p> <p>LOAs from National Development and Reform Commission (China DNA) and Environment Agency (UK DNA) were issued on 2012-04-18 and 2012-06-27 respectively. The information of DNAs can be checked as per UNFCCC webpage.</p> <p><i>Validator's action:</i></p> <p>UNFCCC website has been checked to confirm the China DNA and UK DNA. Refer to: http://cdm.unfccc.int/DNA/index.html</p> <p><i>Conclusion:</i></p> <p>NDRC and Environment Agency are serving as DNA of China and UK respectively this could be confirmed by means of checking the homepage of UNFCCC website.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
F.2.3. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol? (VVS, v. 3.0, § 39(a))	/HCA/ /LOA/ /CDM M&P/	<p><i>Description:</i></p> <p>The LOAs confirm that China and UK ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change on 2002-08-30 and 2002-05-31 respectively and is a party to the Kyoto Protocol.</p> <p><i>Validator's action:</i></p> <p>The authenticity of the HCA and LOA has been checked and is assessed as reliable.</p> <p><i>Conclusion:</i></p>	OK	OK
F.2.4. Do the written approvals confirm that the participation is voluntary? (VVS, v. 3.0, § 39(b))	/HCA/ /LOA/	<p><i>Description:</i></p> <p>The LOAs confirms the voluntary participation of the PPs.</p> <p><i>Validator's action:</i></p> <p>The authenticity of the HCA and LOA has been checked and is assessed as reliable.</p> <p><i>Conclusion:</i></p> <p>The voluntary participation is clearly addressed in HCA of China and LOA of UK.</p>	OK	OK
F.2.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the country? (VVS, v. 3.0, § 39(c))	/HCA/	<p><i>Description:</i></p> <p>The Chinese DNA confirms in the HCA that the proposed project support China is achieving sustainable development.</p> <p><i>Validator's action:</i></p> <p>The authenticity of the HCA has been checked and is assessed as reliable.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i></p> <p>The support of the project for sustainable development is confirmed in the HCA of China.</p>		
<p>F.2.6. Do the written approvals refer to the precise project title in the PoA-DD submitted for registration or an additional specification of the project activity, e.g. PoA-DD version number? (VVS, v. 3.0, §§ 39(d))</p>	<p>/HCA/ /LOA/ /PoA-DD/</p>	<p><i>Description:</i></p> <p>The LOAs refers to the precise PoA title in the final PoA-DD, Animal Manure Treatment Programme in Hubei Province. TÜV NORD could confirm the consistency of the project title.</p> <p><i>Validator's action:</i></p> <p>The relevant documents like PDD and HCA has been checked to verify that they are consistent in terms of the project title.</p> <p><i>Conclusion:</i></p> <p>No inconsistencies have been observed. The HCA, PDD refer to the precise project title.</p>	OK	OK
<p>F.2.7. Are the written approvals unconditional with regard to F.1.3 to F.1.6? (VVS, v. 3.0, § 40)</p>	<p>/HCA/ /LOA/</p>	<p><i>Description:</i></p> <p>The HCA has been checked to confirm whether this requirement is met.</p> <p><i>Validator's action:</i></p> <p>The authenticity of the HCA has been checked and is assessed as reliable.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that the HCA issued by Chinese DNA is unconditional with regard to F.2.3 to F.2.6.</p>	OK	OK
F.2.8. Is the information regarding the project	/LOA/	<i>Description:</i>		

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>participants listed in tabular form in the PoA-DD and is internally consistent with the information provided in the section that contains the contact information of the project participants?</p> <p>(VVS, v. 3.0, § 46)</p>	<p>/HCA/ /PoA-DD/</p>	<p>The section A.3 and Annex 1 of PDD have been checked.</p> <p><i>Validator's action:</i></p> <p>The DD -GSP has been finally checked.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that section A3 and Annex I are internally consistent with regard to the project participants' names.</p>		
<p>F.2.9. Are all project participants listed in the PoA-DD approved at least by one Party involved?</p> <p>(VVS, v. 3.0, § 45)</p> <p><i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.</i></p> <p><i>Describe the means of validation employed to draw this conclusion.</i></p>	<p>/LOA/ /HCA/ /PoA-DD/</p>	<p><i>Description:</i></p> <p>In the final PoA-DD, Wuhan Tianying Environmental Engineering Co., Ltd. is defined as Coordinating/Managing Entity (CME) from China. A&T Carbon Asset Co., Limited. is defined as PP from UK. The LOAs have been checked by the validation team to confirm that the same entity is approved by the party involved. No deviations have been observed. The final PoA-DD and LOAs are consistent.</p> <p><i>Validator's action:</i></p> <p>The authenticity of the HCA has been checked and is assessed as reliable</p> <p><i>Conclusion:</i></p> <p>The DNA of China has approved Wuhan Tianying Environmental Engineering Co., Ltd. as CME. A&T Carbon Asset Co., Limited. is defined as PP from UK.</p>	<p>OK</p>	<p>OK</p>
<p>F.2.10. Are any other project participants than those authorized as project participants listed in the PoA-DD?</p> <p>(VVS, v. 3.0, § 47)</p>		<p><i>Description:</i></p> <p>The HCA unambiguously defined Wuhan Tianying Environmental Engineering Co., Ltd. as CME from China. The LOA unambiguously defined A&T Carbon Asset Co., Limited as PP from Annex I country UK.</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		<p><i>Validator's action:</i></p> <p>The HCA has been checked and compared to the PoA-DD. Furthermore interview has been conducted to confirm the project participants.</p> <p><i>Conclusion:</i></p> <p>It could not be observed that project participants are approved but not included in the PoA-DD.</p>		
<p>F.3. Modalities of Communication Statement</p> <p><i>A due diligence on the Modalities of Communication statement in accordance with the requirements established in the VVS is mandatory.</i></p>				
<p>F.3.1. Has a valid Modalities of Communication (MoC) been provided to the validation team from a project participant with whom the DOE has a contractual relationship? (VVS, v. 03, § 55)</p> <p><i>Indicate whether a MoC has been received, with a clear reference to the contractual relationship of the project participant with the DOE.</i></p>	<p>/VC/ /MoC/</p>	<p><i>Description:</i></p> <p>The MoC was provided to the validation team by the CME, Wuhan Tianying Environmental Engineering Co., Ltd. with whom the DOE has a contractual relationship.</p> <p><i>Validator's action:</i></p> <p>The validation contract was checked by the validation team.</p> <p><i>Conclusion:</i></p> <p>MoC was provided by CME, Wuhan Tianying Environmental Engineering Co., Ltd. TÜV Nord has a direct contractual relationship with the buyer.</p>	OK	OK
F.3.2. Has the MoC been signed by a duly	/MoC/	The personal and corporate identities of all project participants and focal points included in the MoC were validated by:	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>authorized person on behalf of the respective project participant? (VVS, v. 3.0, §§ 54, 56)</p> <p><i>Please Indicate how the personal and corporate identities of all project participants and focal points included in the MoC statement have been validated,:</i></p>	/HCA/ /LOA/	<input checked="" type="checkbox"/> Directly checking evidence for corporate and personal entity <input type="checkbox"/> Notarized documentation <input type="checkbox"/> Written confirmation from the project participant that all corporate and personal details are accurate and valid. , including specimen signatures and employment status of their signaries whether a letter of approval has been received, with a clear reference to the supporting documentation		
<p>F.3.3. Has the MoC statement correctly been completed? (VVS, v. 3.0, §§ 59, 60)</p>	/MoC/	<input checked="" type="checkbox"/> The latest version of the form (F-CDM-MOC) has been used <input checked="" type="checkbox"/> Annex 1 of the MoC is correctly completed <input checked="" type="checkbox"/> The project participants' authorized signatories signing the MoC are also listed in Annex 1 of the MoC.	OK	OK
<p>F.3.4. Does the MOC confirm that the Coordinating/managing entity of the PoA communicates with the Board, and is the information in the MoC on all Project participants consistent with the PoA-DD?</p> <p><i>Procedures for modalities of communication between project participants and the Executive Board. shall apply, with the exception that the coordinating/managing entity shall be either sole or joint focal point for each area of communication. The limit of joint focal points for the programme shall be 5, or equal to the number</i></p>	/MoC/ /PoA-DD/	<p><i>Description:</i></p> <p>The CME and A&T Carbon Asset Co., Limited are nominated as joint focal point for the communication area. The information on MoC of the two PPs is consistent with that in Annex 1 of PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The MoC and the PoA-DD were checked by the validation team.</p> <p><i>Conclusion:</i></p> <p>The CME, Wuhan Tianying Environmental Engineering Co., Ltd. and A&T Carbon Asset Co., Limited are nominated as joint focal point and the information on MoC of the two PPs is consistent with PoA-DD.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>of host Parties if greater than 5.</i>				
F.4. Project documentation editorial aspects <i>The POA-DD and the CPA-DD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.</i>				
F.4.1. Have the latest versions of the PoA-DD and the CPA-DD form been applied? (VVS, v. 3.0, § 62)	/PoA-T/	<i>Description:</i> The latest SSC-PoA-DD form (ver. 02.0, EB67/Annex 30) and SSC-CPA-DD form (Ver. 02.0, EB66/Annex 17) have been applied. <i>Validator's action:</i> The PoA-DD and CPA-DD were cross-checked with the PDD template. <i>Conclusion:</i> The latest version of PoA-DD and CPA-DD were applied for 2 nd GSP.	OK	OK
F.4.2. Have the PoA-DD and the generic CPA-DD been duly filled in accordance with the latest guidance(s)? (VVS, v. 3.0, § 63)	/POAR /	<i>Description:</i> the latest version of <i>Guidelines for completing the component project design document form for small-scale component project activities</i> (ver. 01.0, EB66/Annex 17) and <i>Guidelines for completing the programme design document form for small-scale CDM programmes of activities</i> (ver. 02.0, EB67/ Annex 30) are applied when completing the DDs <i>Validator's action:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		<p>The PoA-DD and CPA-DD were cross-checked with the PDD template.</p> <p><i>Conclusion:</i></p> <p>The latest version of guidelines for completing PoA-DD and CPA-DD were applied for 2nd GSP.</p>		

ANNEX 2: ASSESSMENT OF APPLICABILITY CRITERIA

Table A-2: Assessment of Applicability Criteria (VVS, v. 3.0 §§ 70 – 76)

<input checked="" type="checkbox"/>	Applicability Criteria of applied methodology(ies) have been completely incorporated in the eligibility criteria
<input type="checkbox"/>	Compliance with applicability criteria has been justified and fulfilled by the CPA as follows

Applicability Criteria	Evidence used	met	not met	N/A	Assessment of validation team (results and means of assessment)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-3: Assessment of Baseline Identification (VVS, v. 2.0 §§ 88 – 95)

<input checked="" type="checkbox"/>	Baseline is pre-defined by the methodology
<input type="checkbox"/>	Assessment of baseline see below

Baseline Alternatives identified	In line with the Methodology ?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)
	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	

ANNEX 4: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-4: Assessment of Financial Parameters (VVS, v. 2.0, §§ 120, 121 / in case financial parameters stem from FSR §122,)

<input checked="" type="checkbox"/>	No financial parameters are used for additionality justification
<input type="checkbox"/>	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT	
					Correctness of value applied	Comment
					<input type="checkbox"/>	

ANNEX 5: ASSESSMENT OF BARRIER ANALYSIS

Table A-5: Assessment of Barrier Analysis (VVS, v. 2.0, §§ 124-127)

<input checked="" type="checkbox"/>	No barrier parameters are used for additionality justification
<input type="checkbox"/>	As per additionality justification at CPA level
<input type="checkbox"/>	Assessment of barriers see below

Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	

ANNEX 6: OUTCOME OF THE GSCP

Table A-6: Outcome of the Global Stakeholder Consultation Process

(VVS Version 2.0, §§ 34- 37)

<input type="checkbox"/>	No comments were received during the global stakeholder consultation period
<input checked="" type="checkbox"/>	Comments were received during the 1 st global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:

Comment No.:	Comment by:	Inserted on:	Subject	Comment ^{*)}	Action taken by the validation team to take due account on the comment ^{*)}	Conclusion (incl. CARs CLs or FARs)
1	Darshan (drshn926@gmail.com)	2011-09-22	EC BASELINE	<ol style="list-style-type: none"> 1. Inclusion criteria for CPA inclusion is not fully descriptive and adequate, must be enlarged and refined. The PoA to be webhosted for international stake holder consultations again after modifying the relevant sections. DOE should not undertake the validation of this kind of PoA's. 2. Number of CPA's to be included is not clear and more elaborate explanation necessary. Please correct the same and webhost the project again for comments. DOE to ensure that the project is republished or international stake holder consultation process. 3. DOE must confirm the correct and conservative identification of the Baseline. Baseline must be verifiable. 	<ol style="list-style-type: none"> 1. The EC criteria were completed during the validation. They are in line with EB65 Annex 3 and further relevant UN guidelines and standards. 2. The number of CPA included within the POA is not addressed at the time of GSCP. The POA is in line with UN guidelines and standards. 3. The baseline scenarios are clearly defined in line with the applied methodologies. 4. Site visits have been 	<p>All concerns were taken properly into account during validation.</p> <p>The POA is in line with the UN regulations.</p>

Comment No.:	Comment by:	Inserted on:	Subject	Comment ^{*)}	Action taken by the validation team to take due account on the comment ^{*)}	Conclusion (incl. CARs CLs or FARs)
				<p>Identification of baseline is not clear in all situations.</p> <p>4. Multiple site visits must be made by DOE to cross check and establish proper baselines.</p> <p>5. DOE to check for appropriate positioning of the PoA with regard to technological aspects.</p>	<p>deducted during validation, also to check the baseline situation.</p> <p>5. The correct technical implementation of the CPAs will be checked during the CPA-inclusion stage.</p>	

^{*)} In case clarifications have been requested by the validation team corresponding rows shall be added

ANNEX 7: ELIGIBILITY CRITERIA ASSESSMENT

Table A-7: Assessment on Eligibility Criteria for inclusion of CPAs under this PoA

A full list shall be included in section B.2 of the PoA-DD and B.5 of the generic component of the POA-DD.

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
Geographical boundary	1. All the project activities under the CPA should be located in the boundary of the PoA, i.e. within Hubei Province;	<ul style="list-style-type: none"> Hubei Province administrative area map 	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (a) EB70 Annex 5. The location of each CPA will be clearly defined within Hubei Province, P.R. China.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
To avoid double counting	2. The CPA should pass the procedure of avoiding double counting described in section C (ii) of the PoA-DD;	<ul style="list-style-type: none"> conduct the avoiding double counting procedure 	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (b) EB70 Annex 5.</p> <ul style="list-style-type: none"> The database established and controlled by the CME will be checked. In the database, each farm has its unique registration information. The UNFCCC website will be used to cross-check. Furthermore each project owner will sign a contract with the CME which confirms that the project owner is aware of and has agreed that their activity is being subscribed to the PoA and that their project have neither already been

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
				<p>registered as a CDM project, nor as a CPA of another PoA.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
The start date of the CPA	3. The start date of the CPA is not prior to 02/09/2011(the first GSP date of the PoA).	<ul style="list-style-type: none"> • Equipment purchase contract • Construction contract or construction start record 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(d) EB70 Annex 5. In line with EB 55 Annex 38 §7 (d) the CPA starting date cannot be prior to commencement of validation. The POA-DD has been first made publicly available on 2011-09-20.</p> <p>The expected evidence are as follows:</p> <ul style="list-style-type: none"> - Equipment purchase contract of the CPA. - Construction contract of the CPA <p>The start date of the CPA is defined as the earliest commitment to the financial expenditure of the CPA and is later than the 1st PoA GSP date of 2011-09-20. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
The applicability and other requirements of applied	4. All activities under a CPA are to install anaerobic animal manure management systems to achieve methane recovery and destruction by flaring/combustion or	<ul style="list-style-type: none"> • Technical flow figure • FSR • Approval of FSR 	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (c) EB70 Annex 5.</p> <p>The specifications of technology/measure including the level and type of service are clearly stated. The FSR will state the relevant implementation</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
methodology : criteria related to the applicability conditions of AMS-III.D	gainful use of the recovered biogas;			information as well as the national standard to be complied with. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
	5. The livestock population in the farms included in each CPA under the PoA should be managed under confined conditions;	<ul style="list-style-type: none"> On-site photo 	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16(e) EB70 Annex 5 and AMS-III.D paragraph 1(a). The compliance with applicability and other requirements of the methodology applied by the CPA is given. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
	6. Manure or the streams obtained after treatment are not discharged into natural water resources	<ul style="list-style-type: none"> FSR Approval of FSR technical specification 	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16(e) EB70 Annex 5 and AMS-III.D paragraph 1(b). The compliance with applicability and other requirements of the methodology applied by the CPA is given. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
	7. The annual average temperature of baseline site where anaerobic manure treatment facility is located is higher than 5°C;	<ul style="list-style-type: none"> data from local meteorological station or FSR or 	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16(e) EB70 Annex 5 and AMS-III.D paragraph 1(c). The compliance with applicability and other requirements of the methodology applied by the CPA is given.

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
		<ul style="list-style-type: none"> internet web 		The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
	8. In the baseline scenario the retention time of manure waste in the anaerobic treatment system should be greater than one month;	<ul style="list-style-type: none"> Photo proof from local government; or other evidence 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D <i>"In the baseline scenario the retention time of manure waste in the anaerobic treatment system is greater than one month, ..."</i></p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. The compliance with the applicability and other requirements of the methodology applied by the CPA is given. Therefore the EC is deemed sufficient and appropriate.</p>
	9. The baseline scenario for the manure treatment is that the manure waste from the livestock would be treated in anaerobic lagoons with the depth of at least 1m;	<ul style="list-style-type: none"> proof from local government or other evidence, e.g. building drawing of lagoon 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D <i>"In the baseline scenario the retention time of manure waste in the anaerobic treatment system is greater than one month, and in case of anaerobic lagoons in the baseline, their depths are at least 1 m"</i></p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
				Therefore the EC is deemed sufficient and appropriate.
	10. No methane recovery and destruction by flaring, combustion or gainful use takes place in the baseline scenario;	<ul style="list-style-type: none"> • photo; or • proof from local government; or • other evidence 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5. The compliance with applicability and other requirements of the methodology applied by the CPA is given.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
	11. The residual waste from the animal manure management system must be handled aerobically, e.g. land application;	<ul style="list-style-type: none"> • FSR; 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the specifications of technology/measure of AMS-III.D paragraph 2(a). The compliance with applicability and other requirements of the methodology applied by the CPA is given.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
	12. Only animal manure will be anaerobically treated but no other organic matters are involved in the CPA;	<ul style="list-style-type: none"> • FSR; or • technical demonstration; 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D paragraph 2(a).</p> <p>The compliance with applicability and other requirements of the methodology applied by the CPA is given.</p> <p>The expected evidence is deemed sufficient to</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
				demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
	13. Technical measures will be used to ensure that all biogas produced by the digester is used or flared;	<ul style="list-style-type: none"> • Biogas storage tank; and/or • Flaring system; 	☒	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D paragraph 2(b).</p> <p>The compliance with applicability and other requirements of the methodology applied by the CPA is given.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
	14. The storage time of the manure after removal from the animal barns, including transportation, should not exceed 45 days before being fed into the anaerobic digester.	<ul style="list-style-type: none"> • Technical flow demonstration 	☒	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D paragraph 2(c).</p> <p>The compliance with applicability and other requirements of the methodology applied by the CPA is given.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
	15. The emission reductions from type III components of the CPA should be less than or equal to 60,000 tCO ₂ /yr.	<ul style="list-style-type: none"> • ER Calculation worksheet 	☒	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D paragraph 7. Therefore, the proposed CPA is eligible to apply the</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
				<p>SSC methodology as part of the small scale POA. The ER sheet will be available for each CPA during validation stage.</p> <p>The compliance with applicability and other requirements of the methodology applied by the CPA is given.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
Additionality	<p>16. A CPA should meet any one of following criteria for assessing additionality:</p> <p>(a) Meets relevant requirement in “<i>Guidelines for demonstrating additionality of microscale project activities</i>”, including:</p> <p>➤ The geographic location of the project activity is in a special underdeveloped zone of the host country identified by the Government via any one of the following methods (paragraph 4(a)):</p> <p>✓ The proportion of population with income less than USD 2 per day (PPP) in the region is greater than</p>	<ul style="list-style-type: none"> • evidence regarding undeveloped zone ; • ER Calculation worksheet • equipment brand or equipment purchase contract; • IRR worksheet 	☒	<p>This criterion corresponds to paragraph 16(f) EB70 Annex 5. The additionality will be sufficiently stated. The additionality will be appropriately shown, in line with PoA procedures (EB 55 Annex 38 and EB 65 Annex 3).</p> <p>The Emission reduction sheet of the CPA will calculate the actual emission reductions. And the IRR calculation will give the relevant IRR value, if requested. The benchmark (after tax) of 7% is derived from Economic Evaluation Code for Construction of Project (ver.03) published by the NDRC and Ministry of Construction of P.R. China in 2006, the source is commonly used in China to determine the benchmark for industry region.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion.</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
	<p>50% calculated by using the most recent available data in official notifications for development assistance including for planning, management, and investment;</p> <p>✓ The GNI per capita in the country is less than USD 3000 and the population of the region is among the poorest 20% in the poverty ranking of the host country as per the applicable national policies and procedures which is calculated by using the most recent available data in official notifications for development assistance including for planning, management, and investment;</p> <p>✓ Based on the recommendation of the designated national authority of the host country, the SUZ in the host country has been approved by EB of the CDM and published on the UNFCCC website.</p> <p>➤ The emission reduction from type III is no more than 20ktCO₂e per year.</p>			Hence, the EC is deemed sufficient and appropriate.


PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
	<p>(paragraph 8(c))</p> <p>(b) Meets relevant requirement for the positive list of technologies and project activity types that are defined as automatically additional in “<i>Guidelines for demonstrating additionality of small-scale project activities</i>”, including:</p> <ul style="list-style-type: none"> ➤ Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs); ➤ The emission reductions of each unit included in the CPA is no more than 3,000 tCO₂e per year; <p>(c) According to Investment Barrier in the “Guidelines on the Demonstration of Additionality of Small-scale Project Activities”, the project IRR (before tax) of the project included in the CPA is lower than the benchmark of 7%</p>			
Local stakeholder	17. Each activity included in the CPA must	<ul style="list-style-type: none"> • Environmental impact 	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16(g) EB70 Annex 5, to ensure that an environmental analysis is

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
consultations and environmental impact analysis	have obtained approval of EIA.	assessment and its approval.		conducted as per host country requirements. An EIA will be provided for each activity within the CPA, as well as the official EIA approval. The expected evidence at CPA inclusion stage is deemed appropriate. Therefore the EC is deemed sufficient and appropriate.
Funding from Annex I parties	18. The CPA has no public funding from Annex I Parties;	<ul style="list-style-type: none"> Statement by biogas plant owner. 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(h) EB70 Annex 5. And it is also in line with EB55 Annex 38 §6(n), which says that a diversion of official development assistance is a violation of UNFCCC guidelines.</p> <p>The CME will provide a Statement from the biogas plant owner.</p> <p>The expected evidence at CPA inclusion stage is deemed appropriate.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
Others	19. The CPA is not a de-bundled component of a large scale activity. De-bundling check will be implemented according to <i>"Guidelines on assessment of debundling for SSC project activities"</i> .	<ul style="list-style-type: none"> PoA database; and/or UNFCCC website 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(l) EB70 Annex 5. In line with <i>Guidelines on assessment of debundling for SSC project activities</i> (ver. 03, EB 54 Annex 13).</p> <p>The PoA database served by CME will be available as well as the project information displayed on the UNFCCC website.</p> <p>It will be ensured that the CPA will not have</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
				<ul style="list-style-type: none"> the same activity implementer as the proposed small scale CPA or coordinating / managing entity, which also manages a large scale PoA of the same technology measure, and; <p>AND</p> <ul style="list-style-type: none"> The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point. <p>The expected evidence at CPA inclusion stage is deemed appropriate. Therefore the EC is deemed sufficient and appropriate.</p>
	20. No fossil fuel is used in each activity included in the CPA other than for transportation;	<ul style="list-style-type: none"> FSR; or Technical flow; 	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (c) EB70 Annex 5 and the applicability criterion of the applied methodology.</p> <p>The expected evidence is deemed sufficient for demonstration the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
	21. Each animal manure treatment system included in the CPA is a Greenfield one and not a retrofit or capacity addition project.	FSR; or other evidence;	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (c) EB70 Annex 5 and the applicability criterion of the applied methodology.</p> <p>The expected evidence is deemed sufficient for demonstration the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
	22. The CPA crediting period does not exceed 31/01/2041 (the PoA end date).	CPA-DD	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 7(c) EB55 Annex 38. The crediting period must not extend beyond the end date of the Programme of Activities (PoA) to which it belongs.</p> <p>The information will be included in the CPA-DD and checked against the duration of the PoA.</p> <p>The EC is deemed sufficient and appropriate.</p>

ANNEX 8: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD Ji/CDM Certification Program

Ms. Huang Jie

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2015-07-01
VCS / ISO 14064-2	Senior Assessor	2015-07-01


Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies

108 – Rev. 1, Date: 2012-07-02

108_S01-F003_2012-07-02_rev1.doc

S01-F003-mv2 / 2012-04-05



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD Ji/CDM Certification Program

Mr. Ulrich Walter

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification) Technical Reviewer	2014-12-08
Ji	Lead Assessor Technical Reviewer	2014-12-08
VCS / ISO 14064-2	Lead Assessor Technical Reviewer	2014-12-08


Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal Energy Generation	
1.2	Renewable Energies	
2.1	Electricity Distribution	
2.2	Heat Distribution	
3.1	Energy Demand	
5.1	Chemical Process Industries	
11.1	Chemical Process Industries	
12.1	Chemical Process Industries	
13.1	Waste Handling and Disposal	13.1.1 Waste Management 13.1.2 Waste Water Management
13.2	Animal Waste Management	
15.2	Animal Waste Management	

149 – Rev. 4, Date: 2012-02-27

149_S01-F003_2012-02-27_rev4.doc

S01-F003-mv2 / 2012-04-05



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD Ji/CDM Certification Program

Ms. Miao Yu

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-06-27
VCS / ISO 14064-2	Lead Assessor	2015-06-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies

164 – Rev. 3, Date: 2012-06-28

164_S01-F003_2012-06-28_rev3.doc

S01-F003-mv2 / 2012-04-05



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JICDM Certification Program

Ms. Weiming Yu

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-09-13
VCS	Lead Assessor	2014-09-13

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
13.1	Waste Handling and Disposal

069 – Rev. 1, Date: 2011-09-14

069_S01-F003_2011-09-14_rev1

S01-F003 rev0 / 2010-04-19



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JICDM Certification Program

Mr. Stefan Winter

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-06-30
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2014-06-30

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal energy generation	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
2.2	Heat distribution	
3.1	Energy demand	
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management
13.2	Animal waste management	
15.2	Animal waste management	

163 – Rev. 2, Date: 2011-08-10

163_S01-F003_2011-08-10_rev2

S01-F003 rev1 / 2011-08-02



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JICDM Certification Program

Ms. Christina Stöhr

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-12-12
VCS / ISO 14064-2	Lead Assessor	2014-12-12

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal

200 – Rev. 3, Date: 2012-07-05

200_S01-F003_2012-07-05_rev3.doc

S01-F003 rev2 / 2012-04-05



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JICDM Certification Program

Mr. Dr. Jochen Schubert

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-05-11
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2014-05-11

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR INCLUDE SUB-AREAS
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management

056 – Rev. 2, Date: 2011-07-29

056_S01-F003_2011-07-29_rev2

S01-F003 rev0 / 2010-04-19